



*KPM* Center for Public Management  
University of Bern

# Varieties of capital cities

## Explaining locational policies in four secondary capital cities

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Inauguraldissertation zur Erlangung der Würde eines Doctor Administrationis Rei Publicae der  
Wirtschafts- und Sozialwissenschaftlichen Fakultät der Universität Bern  
Bern, 28. Februar 2019

Originaldokument gespeichert auf dem Webserver der Universitätsbibliothek Bern



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Die Fakultät hat diese Arbeit am 15. Dezember 2016 auf Antrag der beiden Gutachter Prof. Dr. Fritz Sager und Prof. Dr. Daniel Kübler als Dissertation angenommen, ohne damit zu den darin ausgesprochenen Auffassungen Stellung nehmen zu wollen.

2019, Bern, Publikation der Dissertation via e-Diss@UNI BERN

## Acknowledgments

This thesis has been written in an interdisciplinary research project called “Capital City Dynamics: A Comparative Analysis of Innovation and Positioning of Secondary Capital City Regions” funded by the Swiss National Science Foundation under grant no. 143784. The research team consisted of Prof. Dr. Fritz Sager, the two economic geographers Prof. Dr. Heike Mayer and Dr. Martin Warland and myself (all from University of Bern).

I want to thank Fritz Sager for his support, guidance and mentoring in these three and a half year of academic development. He establishes a stimulating intellectual environment in which individual initiatives, commitment and creativity is fostered and esteemed. Furthermore, I am grateful to Heike Mayer for the productive collaborations and her helpful advice with regard to improving research processes and academic writing. I want to thank Prof. Daniel Kübler who kindly accepted to serve as the second supervisor of this thesis.

This thesis heavily relied on interviews and field studies. I am thankful and indebted to my interview partners that shared their time and insights with me. I want to thank the colleagues at Leiden University – Campus The Hague, Virginia Tech – Research Center Arlington, and University of Ottawa – Center on Governance who helped me conducting my research, shared their networks and gave feedback on preliminary findings. I am especially thankful to Prof. Dr. Caroline Andrew and Dr. Patrick Overeem who served as local coordinators.

Special thanks goes to Martin Warland who contributed making the nine-months of field studies a great experience, kept me entertained and helped me navigating through economic geography literature. I want to mention my colleagues Caroline, Céline, Iris, Johanna, Lyn, Markus, Stefan and Susanne who all make the KPM Center on Public Management an exciting place to do research, spend time and play football. I am grateful to Ramin Wasel, Markus Hinterleitner, Susanne Hadorn, Martin Warland, Christian Rosser, Stefan Wittwer, Lyn Pleger, and Anna Frey who all proofread and commented parts of this thesis.

My parents have supported me all these years of personal and academic development. Their hard work, dedication and empathy has always been a source of inspiration. This thesis would not exist without the constant support, care and encouragement from Roma Christen.

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## 1. Introduction

Capital cities play an important role in shaping the political, social and cultural identity of a nation. As the seat of power and decision-making, capital cities represent a nation's identity. However, the political and symbolical centrality of capital cities in the national urban system has been challenged. The decline of the nation state, the rise of transnational institutions, the ascendance of global cities, and the increasing concentration of the knowledge economy in a few dominant metropolitan centers force capital cities to enter a globalized and increasingly knowledge-intense interurban competition. As a consequence, the political economy of capital cities is changing and "the traditional view of the capital city as the reliable host city of the nation state, which was mired in a comfortable dependency of the very state it was hosting, may not hold up anymore" (Mayer et al. 2016, 12). These challenges are particularly salient in capital cities that are not the primary economic centers of their respective nations – so-called secondary capital cities (SCCs).

Globalization scholars argue that SCCs have lost importance because global cities are much more critical to the functioning of the global economy since they constitute nodal points in the world city network by coordinating and controlling capital flows (Friedmann 1986; Sassen 1991; Scott 2001). Compared to global cities, SCCs are nationally-orientated and do not display a coherent integration into the world city network (Taylor and Derudder 2014). Similarly, rescaling theories imply that along with the up-scaling and down-scaling of state functions in global capitalism, SCCs disappear from the central locus and have to arrange themselves in the periphery of the global economy (Swyngedouw 1997; Brenner 1999; Brenner 2004). As a consequence, SCCs lost ground over the last couple of decades – "casualty both to fashionable enthusiasm for 'global cities' against national centers, and to a shift of interest toward less formal and monolithic kinds of institutions than those which were the staple of political capitals during the last century" (Gordon 2003, 3).

This decline in importance also affects scholarly attention. SCCs lost ground over the last couple of decades – "casualty both to fashionable enthusiasm for 'global cities' against national centers, and to a shift of interest toward less formal and monolithic kinds of institutions than those which were the staple of political capitals during the last century" (Gordon 2003, 3). Research about high profile cities such as global or world cities (e.g. Sassen 1991), global city-regions (e.g. Scott 2001), metropolitan regions (e.g. Hall and Pain 2006), and megaregions (Florida, Gulden, and Mellander 2008) dominated urban studies since beginning of the 1990s. Thus, SCCs remain rather understudied.

And yet, the recent economic crisis has revealed that SCCs still play an important role because global capital flows are regulated within the context and institutions of nation states (Rodrik 2011) that are for the most part located in capital cities. Important decisions about bail outs of banks and industrial firms were taken in Washington, D.C. and not in New York City or Detroit. Furthermore, the study of SCCs is meaningful because this type of capitals are distributed globally. Famous examples of SCCs are located in Africa (e.g. Pretoria, Abuja), Asia (e.g. Jerusalem, Karachi), Australia (e.g. Wellington, Canberra), Europe (e.g. Berlin, The Hague), North-America (Washington D.C., Ottawa), and South-America (e.g. Brasilia). The global system of capital cities is dynamic. New capital cities have been established from scratch or capital cities have been relocated to smaller cities. For example, the Brazilian capital was relocated from Rio de Janeiro to Brasilia in 1960, Abjua became the new Nigerian capital in Abuja in 1991, and Naypyidaw was established as the new capital of Myanmar in 2006. Similarly, Malayisa build Putrajaya as the new Malaysian federal administrative capital in 1999, South Korea opened a new administrative capital in 2012 called Sejong City and Egypt projects a yet-unnamed new capital city just outside Cairo.

SCCs are a worthwhile object to study not only because they are globally distributed, but because they also feature a remarkable type of political economies:

“though all cities experience the interaction – both cooperative and conflicting – of government and private interests, nowhere do these interests intersect with such power as in a capital: the government-market interactions are more complicated in a capital, and the national government has greater influence over the local economy, labor markets, and land markets. This creates a distinctive political economy of capital cities” (Campbell 2000, 10).

This strong influence of the national government shapes local economic interactions, the local governance regimes as well as the formulated local policies in distinctive ways. Thus, only in SCCs it is possible to get a hold of the effects of the capital city function on local policy-making and local politics. In primary capital cities, the capital city function would be much harder to detect or to distinguish because primary capitals often incorporate international economic functions that go beyond those associated with a capital city (Zimmermann 2010, 764).

Against the background of this specific political economy of SCCs, this thesis studies the policy endeavors, i.e. the formulated locational policies, of SCCs to position themselves in globalized and increasingly knowledge-intensive interurban competition. Locational policies aim at enhancing the economic competitiveness of localities by identifying, developing and exploiting their place-specific assets that are considered most competitive. Locational politics and specific locational policies have been studied in a varieties of cities or regions of global importance (Brenner 1999; Jessop and Sum 2000; Savitch and Kantor 2002; van der Heiden 2010). What is missing so far is a framework that

allows to systematically assess a variety of locational policies. The locational policies framework proposed in this thesis fills this gap. This conceptual advancement allows me to study the ways in which SCCs positioning themselves in global interurban competition. Policy endeavors of SCCs to sustain in interurban competition have not scrutinized systematically yet. Thus, this thesis aims to push forward the conceptual understanding of locational policies formulation as well to gather empirical accounts of locational policies from a type of city that is ‘off the map’ in urban studies.

The analytical framework of this thesis is embedded in the neo-institutional literature because this theoretical lens emphasizes place-based resources and constraints in the formulation of policy choices. Locational policies are dependent on a variety “institutional and/or territorial structures as well as on broader economic, political and sociocultural factors” (Jessop and Sum 2000, 2291). Varieties of capitalism suggests that the economic orientation and the political-institutional setting of a political economy are the two crucial explanatory factors for strategic decisions of localities (Hall and Soskice 2001). The economic orientation is approached with the Regional Innovation System concept (Cooke 2001; Doloreux and Parto 2005; Asheim, Smith, and Oughton 2011) stemming from economic geography literature. The political-institutional setting of SCCs is captured by the Multilevel Governance concept (e.g. Hooghe and Marks 2003; adapted to urban politics see Kübler and Pagano 2012; Horak and Young 2012). In line with neo-institutional theories, I assume that these two explanatory factors constrain or enable the formulation of different types of locational policies. I furthermore incorporate agency in my analytical framework, to capture how local decision makers may draft locational policies that aim at the very structures that simultaneously enable or restrict them (Abrams 1982; Giddens 1984; Imbroscio 1999). Hence, the analytical framework of this thesis is interdisciplinarily informed by theories from political science, urban studies, and economic geography and incorporates the simultaneity of structure and agency. The thesis is guided by four research questions

- First, I want to investigate *what kind of locational policies are being formulated in SCCs*. To capture the wide range of possible locational policies, I present a self-developed locational policies framework that features six categories of locational policies. These locational policies constitute the phenomena to be explained. I will examine the concrete manifestations of locational policies for all six categories.
- Second, I am interested in *what explains the formulation of these locational policies in SCCs*. Locational policies aim to develop and present local assets that seem most competitive for engaging in interurban competition. Thus, locational policies are formulated based on place-specific and path-dependent assets. As a consequence, I assume that the regional

innovation system and the multilevel governance setting constrain or enable the formulation of locational policies in specific ways.

- Third, I examine how singular locational policies are connected to a *locational policies agenda*. In order to study locational policies agendas, I look at links between the different locational policies categories and extract explanatory factors that are important to understand the formulation of multiple locational policies. Answering this third research question is mainly a summarizing exercise based on the findings of the former two research questions.
- Fourth, I study the *different actors who are involved in formulating locational policies in SCCs*. The interplay between local public and local private actors in local governance regimes or urban regimes will be of particular interest (Stone 1989; Stone 1993). This interplay is worth studying because the specific political economy of SCCs produces a different configuration of actors that engage in the formulation of locational policies.

To answer the four research questions, this thesis compares four SCCs: Bern, The Hague, Ottawa and Washington, D.C.. I juxtapose within-case analyses with a comparative case study research design that offers a solid base to evaluate causal claims (Collier, Brady, and Seawright 2010, 10). The backbone of this thesis consists of 91 semi-structured, in-person interviews with 103 interview partners. The interview partners were carefully selected to ensure sufficient variety within the cases and necessary consistency between the cases. I triangulated these reactive data with non-reactive data by studying secondary sources as well as publicly available primary sources. The data collection was realized during three months of field study in each of the four SCCs. The dissertation incorporates several aspects that the debate by Ward et al. (2011) outlined as productive and relevant for contemporary urban studies: The interdisciplinary research characteristic, the incorporation of a variety of actors into the analysis of urban politics, the comparative case-study design and the simultaneity of structure and agency.

More specifically, the dissertation contributes to the literature in urban studies, political science and economic geography in multiple ways. Three contributions are highlighted at this part of the thesis. First, the thesis reveals how institutional factors influence locational policies formulated in different SCCs and, therefore, it takes a stance against deterministic perspectives in studying city strategies in globalization. Second, the concept of ‘structuring’ (Abrams 1982; Giddens 1984; Imbroscio 1999, 46–47) is integrated in a neo-institutional analytical framework. Thus, the analytical framework shows how structure and agency can be fruitfully combined. And third, this thesis pushes forward the conceptual understanding of locational policies by outlining and applying a locational policies framework. This framework contains added value for a systematic study of urban

strategies devised to face interurban competition and may be of use for scholars interested in studying cities' economic development policies more generally.

This thesis should also give guidance to local decision makers how to better prepare SCCs to sustain and prosper in interurban competition. SCCs are advised to focus on a two-dimensional position strategy: as the capital city and as a business city. This thesis showed that such a positioning strategy may be realized by strategically implement locational policies and by exploiting the potential of the 'triple helix' (Etzkowitz and Leydesdorff 1995) via innovation policies. SCCs possess local assets suitable to sustain in the increasingly knowledge-intensive interurban competition. SCCs unify economic secondarity and political primacy what translate into a specific political economy. In today's economic globalization, this specific political economy can be leveraged by positioning itself with a distinctive profile in interurban competition. SCCs cannot escape their destinies as government towns but they can formulate a variety of locational policies in order to supplement their capital city function with an economic promising profile.

The thesis proceeds as follow: The first chapter defines SCCs, identifies the population of SCCs and reviews existing literature about SCCs. In the theoretical chapter, I approach the phenomena to be explained by presenting a self-developed locational policies framework. The next subchapters discuss the two explanatory factors, namely Regional Innovation Systems and Multilevel Governance arrangements. The last subchapter in the theoretical chapter integrates all the concepts into an analytical framework. The next chapter outlines the research design. The empirical part of this thesis starts with the case study of Bern, followed by the case study accounts of The Hague, Ottawa, and Washington, D.C.. All case study chapters start by giving an overview of the city and then explain the formulation of locational policies category by category followed by a summarizing discussion of the locational policies agenda. The comparative discussion chapter summarizes the findings of the four case studies, integrates the findings into the literature, discusses local governance regimes in SCCs and finally attempts to generalize the findings to other cities. The last chapter concludes the thesis by summarizing the main findings and point to theoretical, empirical and practical implications of the findings.

## 2. What do we know about secondary capital cities?

The first part of this chapter defines and identifies SCCs and discusses the rationales to establish a SCC. The second part of this chapter reviews the body of capital city research and identifies research gaps in the existing literature.

### 2.1. Defining and identifying secondary capital cities

The word capital itself is based on the Latin word *caput* “meaning head and denotes a certain primacy status associated with the very idea of a capital” (Gilliland 2013, 25). Gottman and Harper (1990, 63) define capital cities as the

“seat of power and a place of decision-making processes that affect the lives and future of the nation ruled, and that may influence trends and events beyond its borders. Capitals differ from other cities: the capital function secures strong and lasting centrality; it calls for a special hosting environment to provide what is required for the safe and efficient performance of the functions of government and decision-making characteristics of the place”.

While Gottman and Harper (1990) establish the unique characteristics of a capital city in comparison to other cities in the national urban system, they did not categorized different types of capital cities. Hall (2006) offers the most famous categorization of capital cities. He distinguishes between seven types that are not mutually exclusive:

- 1) Multi-Function Capitals (e.g. London, Paris, Madrid, Stockholm, Tokyo)
- 2) Global Capitals as a special case of the first type (e.g. London, Tokyo)
- 3) Political Capitals (e.g. The Hague, Washington D.C., Ottawa, Canberra, Brasilia)
- 4) Former Capitals (e.g. St. Petersburg, Philadelphia, Rio de Janeiro)
- 5) Ex-Imperial Capitals (e.g. London, Madrid, Lisbon, Vienna)
- 6) Provincial Capitals (e.g. Milan, Stuttgart, Toronto)
- 7) Super Capitals which are centers of international organizations (e.g. Brussels, Geneva, Nairobi)

Another capital city categorization by Campbell (2000) incorporates additional characteristics such as the size of the city, the form of the national government or the timing of the capital's establishment. Among others, he distinguishes between “the capital as dominant economic city in the nation” (such as Montevideo, Paris, London, Copenhagen) and “the capital as secondary city” (such as Ottawa, Bonn, Canberra, Ankara) defined by the economic status and relative position of the capital within the respective nation's city network (Campbell 2000, 4). Similarly, Zimmermann

(2010, 761–62) distinguishes between two types of capital cities which “may or may not be the major economic agglomeration”.

Thus, all major capital city categorizations differentiate between the political and the economic role a capital city can exert. Whilst the political role is attached to the capital city status “there is no rule that a political capital automatically attracts concomitant economic functions” (P. Hall 2006, 10). Following these categorizations, I use the differentiation between the economic status and the political status as the crucial element in my definition of a SCC. In line with Mayer et al. (2016), I define a SCC as the capital city of a nation where at least one city within the respective nation is economically more important to the country than the capital city.

SCCs can be found on every continent. Famous examples of SCCs are located in Africa (e.g. Pretoria, Abuja), Asia (e.g. Jerusalem, Karachi), Australia (e.g. Wellington, Canberra), Europe (e.g. Berlin, The Hague) North-America (e.g. Washington D.C., Ottawa), and South-America (e.g. Brasilia). For reasons of comparability and data availability, this thesis concentrates on SCCs in OECD countries (see subchapter 4.1). To identify SCCs based on the aforementioned definition, I will use the nominal Gross Domestic Product (GDP) as it best displays the economic power and size of a city. Ten out of 34 OECD countries feature a SCC (see Table 1). Whereas Ankara, Bern, Canberra, Ottawa, The Hague, Washington D.C. and Wellington are classic examples of SCCs, Berlin, Jerusalem and Rome are secondary regarding their economic performance but by no means secondary regarding their symbolic importance for their nation.

The OECD database does not have complete data for Switzerland and Australia and no data for Israel. However, alternative economic indicators show that all three countries feature a SCCs. In Australia, the Greater Sydney Area is an economic powerhouse with a labor force of 2.189 Million persons and a total employee income of AU\$ 134 million. The Australian Capital Territory is 10 times smaller with a labor force of 202'877 persons and a total employee income of AU\$ 13 million (Australian Bureau of Statistic 2016). In Israel, 11% of all employees work in Jerusalem whereas 16% of all employees work in Tel Aviv (Choshen and Korach 2010, 38–40). For Switzerland, 297'320 person are employed in the agglomeration of Bern, whereas the agglomeration of Zurich employed 889'307 persons (Swiss Federal Statistical Office 2015d).

Table 1: Cases belonging to the population of SCCs in OECD countries

Country	Capital City	GDP Metropolitan region US\$ % of national GDP	Primary City	GDP Metropolitan region US\$ % of national GDP
Australia	Canberra	n/a	Sydney	199'970 20.10%
Canada	Ottawa	56'323 3.94%	Toronto	271'449 18.99%
Germany	Berlin	165'376 4.92%	Munich	184'701 5.49%
Israel	Jerusalem	n/a	Tel Aviv	n/a
Italy	Rome	189'919 9.44%	Milano	234'523 11.65%
Netherlands	Den Haag	39'517 5.31%	Amsterdam	121'289 16.31%
New Zealand	Wellington	15'423 13.51%	Auckland	39'792 34.87%
Switzerland	Bern	n/a	Zurich	77'011 18.63%
Turkey	Ankara	74'936 8.52%	Istanbul	243'277 27.65%
United States	Washington D.C.	442'758 2.86%	New York	1'215'233 7.86%

Source: OECD GDP Metropolitan Areas for Australia, Canada, Germany, Italy, Netherlands, Switzerland, and United States. Data from 2012 in million US\$. Australia and Switzerland only data for the primary city available. OECD GDP Regional database TL3 regions for New Zealand and Turkey. Data from 2012 in million US\$. Turkey data from 2008. Israel no available data found.

The rationale for establishing a new SCC or rewarding the capital city status to a secondary city is often connected to a federalist state organization. Elazar (1987, 75) argues that “true federal systems do not have capitals, they have seats of government”. Such considerations lead to an often formulated assumption that SCCs are more likely to be found in federal cities because the location choice of capital cities was often a compromise, to balance power relationships, but also to separate economic and political power or to serve as independent, alternative sites to the traditional commercial centers (Gottmann 1977; Harris 1995; Slack and Chattopadhyay 2009; Nagel 2013b; Mayer et al. 2016; Mayer et al. 2018).

However, looking at the set of SCCs in OECD countries, the relationship between federalism and SCCs is not that clear. Out of the ten OECD countries that feature a SCC, only five are

federations.<sup>1</sup> Consequentially, five countries in the OECD feature a SCC but are not organized as federations (Israel, Jerusalem; Italy, Rome; New Zealand, Wellington; The Netherlands, The Hague; Turkey, Ankara). Furthermore, four federal states that are members of the OECD – Belgium, Brussels; Spain, Madrid; Mexico, Mexico City; Austria, Vienna – have a primary city as their capital.

Varying reasons explain the establishment of SCCs in the four non-federal OECD states. The historical importance of The Hague as the place for resolving conflicts accounts for its capital city status (see chapter 7). Jerusalem failed to keep its economic superiority mainly due to military conflicts. The establishment of Ankara as the new capital city in 1923 can be explained as a symbol for the Turkish republican modernization (Batuman 2013). Wellington has been made the capital of New Zealand in 1841 because it was feared that the more populated South Island may secede if New Zealand does not chose a more central location for its capital (Levine 2012). In contrary, federal OECD countries that feature no SCCs are former empires (Belgium, Brussels; Spain, Madrid; Mexico, Mexico City; Austria, Vienna). Thus, there might be some truth in the observation that especially federations that were created by a deliberative ‘coming together’ of relatively autonomous units pooling their sovereignty (Stepan 1999, 23) seem to choose secondary cities as their capitals (Gilliland 2013, 25).

The worldwide system of capital cities is dynamic. New capital cities have been established from scratch or capital cities relocated to smaller cities what thus created SCCs. A famous example is the relocation of the Brazilian capital from Rio de Janeiro to Brasilia in 1960. Brasilia was built from scratch to serve as the new federal capital that should herald the start of a new era of development, peace and prosperity for Brazil (Madaleno 1996, 273). Also Abuja, the new capital city of Nigeria was a planned project and became the capital city in 1991 (Elaigwu 2009). Other examples are the development of the small Ottoman town Ankara to the capital of the new Turkish republic, the establishment of Putrajaya as the new Malaysian federal administrative capital in 1999 or the establishment of Naypyidaw as the new capital of Myanmar in 2006. South Korea opened its new administrative capital in 2012 called Sejong City. This planned city hosts almost all national government organizations as well as public organizations, research units and a university. In Egypt, a project of building a yet-unnamed new capital city just outside Cairo is under discussion.

Four main reasons justify the relocation of a capital city or the establishment of new capital. First, the central location of a capital city should ensure equal access of citizens to their capital. James Madison, co-author of the seminal ‘Federalist Papers’ (Hamilton, Madison, and Jay 1982) and

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<sup>1</sup> I use the dataset by Armingeon et al. (2016) to determine if an OECD member country is a federation.

fourth President of the United States (1809-1817), formulated a theory of representation arguing that the republican principle of 'equal right' should matter when determining the location of the capital (Engstrom, Hammond, and Scott 2013, 225). Such a 'Madisonian argumentation' was put forward when building Brasilia (Madaleno 1996, 273–74) and Washington, D.C. (see chapter 8) from scratch as well as when relocating the New Zealandia capital from Auckland to Wellington (Levine 2012). Second, infrastructure needs of a capital city and especially the congestions of old capitals have played a role, for instance in relocating the Nigerian capital from Lagos to Abuja (Elaigwu 2009, 201; Abubakar 2014, 82) as well as in the discussion about the new capital city project in Egypt (The Capital Cairo 2015). Third, military and defense considerations are sometimes brought forward to justify the relocation of a capital or the establishment of a new capital. Such reasoning played a role in the establishment of Ottawa (see subchapter 6.1.1). It was stressed in favoring the relocation to Abuja (Abubakar 2014, 82). Fourth and arguably most importantly, the capital city serves as a nationalistic symbol. Especially, former colonized nations want to break with their colonial ties by building a new capital city on a *tabula rasa* (Moser 2010, 285). This was the case in Turkey, where Ankara was established as the symbol of the Turkish republican modernization and secularism, i.e. Kemalism (Batuman 2013). Similarly, Putrajaya should function as a symbol for the Malaysian ambitious modernization agenda and its new 'progressive Muslim' identity (Moser 2010). Also the relocation of the German capital from Bonn to Berlin was symbolically connected to the German reunification and the political integration project of the former German Democratic Republic (Zimmermann 2009).

## 2.2. Research about secondary capital cities

No coherent body of literature about secondary capital cities exists. One reason for this lack of scholarly attention may be the megalomania tendencies of urban research. Research about high profile cities such as global or world cities (e.g. Sassen 1991), global city-regions (e.g. Scott 2001), metropolitan regions (e.g. Hall and Pain 2006) and, megaregions (Florida, Gulden, and Mellander 2008) dominated since beginning of the 1990s. SCCs simply lack the intensity of international connectivity to the global scale of capital accumulation. As a consequence, the category of SCCs is reduced to its secondary economic importance and remains rather understudied.<sup>2</sup> This is unsatisfactory since 'the urban' is far away from being a homogenous category (Brenner and Schmid 2014).

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<sup>2</sup> In that regard faces the category of capital cities the same fate as smaller cities that are not receiving much scholarly attention and are analyzed with theories that have been developed by studying high profile cities (Robinson 2002; Bell and Jayne 2006; Kaufmann and Arnold 2017).

Research about capital cities is fragmented between the disciplines and mostly dominated by individual case study accounts without much attempt to generalize findings (Mayer et al. 2016, 12). Some scholars have examined issues regarding urban planning, architecture and history of capital cities, particularly as they relate to the representation of power (Clark and Lepetit 1996; Gordon 2006; Thomas Hall 2010; Sohn and Weber 2000). Other authors have focused on the symbolic representation of capital cities as places of national identity and where a nation's memory and symbols are staged (Cochrane 2006; De Frantz 2006; Till 2006). Economic geography approaches the political economy of capital cities as 'information cities' (Castells 1989), 'national information brokers' (Abbott 1999; Abbott 2005) or 'transactional cities' (Gottmann 1977). This strand of research focuses on spatially manifested interaction between government organizations, private sector and knowledge institutions which produces information and knowledge in a distinctive regional economy (Abbott 1999; Feldman 2001; Gerhard 2007; Markusen et al. 1991).

Donald Rowat (1968; 1973) set the direction for the political science and public administration literature by comparing governing arrangements in seventeen federal capitals. He focused on the relationship between the national and the local level with the underlying conflict of serving both the interests of the nation as a whole but as well and the interests of the local residents. This conflict was later named the classical capital city conflict, the challenge of dual democracy or simply the Rowat thesis (Nagel 2013b; Harris 1995). Rowat's comparative research interest stemmed from the concern that the discussions about revising Ottawa's governing arrangements are too heavily influenced by debates about creating a federal district due to the spatial proximity to the United States and the cultural proximity to Australia. His comparison aimed at presenting other examples of how to govern a capital city in a federation.

Building on the legacy of Donald Rowat, Canadian political scientists have become active in discussing questions of governing, planning and developing capital cities. Three international conferences in the last 25 years congregated academics and practitioners. Each conference resulted in an edited volume (Taylor, Lengellé, and Andrew 1993; Slack and Chattopadhyay 2009; Chattopadhyay and Paquet 2011). Especially the volume of Slack and Chattopadhyay (2009) offers a rigid comparison of the funding mechanisms and governing arrangements in eleven federal capitals.<sup>3</sup>

In a similar vein, the research in Washington, D.C. displays a distinctive research tradition focusing on the organization of the federal district with its restricted local autonomy. The contributions that

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<sup>3</sup> This edited volume covers and compares Canberra, Brussels, Ottawa, Addis Ababa, Berlin, New Delhi, Mexico City Abuja, Cape Town & Pretoria, Bern and Washington D.C..

cover Washington D.C. are rather advocacy-driven as they argue for more autonomy of the district authorities regarding policy-making and levying taxes. Two early contributions are very influential. Charles Harris (1995), inspired by Rowat, was primarily concerned about the domination of national interest in local politics over the interests of the local citizens. Carol O’Cleireacain’s (1997) research was driven by the financial problems of Washington, D.C.. She focused on taxation and representation issues that may ease some of the structural problems of the district. Following this legacy, studies and reports of Washington, D.C. argue for more fiscal and governing autonomy as well as financial support for the district infrastructure (Boyd and Fauntroy 2002; Wolman et al. 2007; G. Young 2008). Taking a different lens, a more sociological strand of research focuses on the huge wealth inequalities in the district and the consequential of problems of segregation, race and gentrification (Sturtevant 2014; Hyra and Prince 2016).

Whereas Canada and the United States both feature a rather coherent capital city research tradition, the European body of capital city literature is rather diverse. Similar to the research on the other side of the Atlantic, the political theorist Klaus-Jürgen Nagel (2013b) reflects about the role of capital cities in federations. He uses the literature about asymmetric federalism to study the local autonomy of federal capital cities and thus studies the classical capital city conflict. Furthermore, the relocation of the German capital from Bonn to Berlin triggered reflections about capital cities (Zimmermann 2009; Zimmermann 2010). Another comparative volume studies the socio-economic segregation of neighborhoods in European capital cities (Tammaru et al. 2015). However, this kind of research does not reflect about the capital city function. Motivated by the moderate economic performance of Bern (Kaufmann et al. 2016), scholars from the University of Bern launched a new interdisciplinary and comparative research initiative – this dissertation is a part of it – that tackles the political economy of capital cities from an economic geography and political science perspective (see also Mayer et al. 2013; Mayer et al. 2016, Mayer et al. 2018).

All in all, this brief literature review shows a distinctive political science and public administration research strand that emerged by studying the Canadian and US SCCs. The research focus lies on the local autonomy of SCCs as well as the intergovernmental organization of governing SCCs. Few research tackles policy-formulation of SCCs in other policy fields and so far, no study addressed the question of locational policies formulation in SCCs. This thesis fills this research gap. In the next chapter, I discuss the analytical framework that allows me to fill this research gap by answering the four research questions proposed above.

### 3. Theory

In this theoretical chapter, I outline the analytical framework of this thesis step by step (see Table 2). The analytical framework is embedded in the neo-institutionalism literature. I especially borrow from the varieties of capitalism theory which states that the economic orientation and the political-institutional setting of a political economy are the two crucial explanatory factors for strategic decisions of localities (Hall and Soskice 2001). The economic orientation is captured by the Regional Innovation System concept (Cooke 2001; Doloreux and Parto 2005; Asheim, Smith, and Oughton 2011) and the political-institutional setting by the Multilevel Governance concept (e.g. Hooghe and Marks 2003; adapted to urban politics see Kübler and Pagano 2012; Horak and Young 2012). The phenomena to be explained are locational policies formulated in SCCs that I capture with a self-developed locational policies framework consisting of six categories. I link the whole analytical framework with the help of two causal mechanisms that aim at incorporating the simultaneity of structure and agency. First, the causal mechanism ‘enabling/constraining’ stems from neo-institutional theories and proposes that purposive actors operate within an institutional setting that enables and constrains their strategic actions. Second, the causal mechanism ‘structuring’ proposes that actions can be directly aimed at the very structures that are simultaneously enabling and constraining them. The chapter ends by summarizing the expectations as well as the analytical framework.

Table 2: Analytical framework

Overarching Theory	Neo-institutionalism Varieties of capitalism		
Variables	Explanatory factor 1: Economic orientation	Explanatory factor 2: Political-institutional setting	Phenomena to be explained Locational Policies
Concepts	Regional Innovation System	Multilevel Governance	Locational Policies Framework
Configurations of the concepts	<u>Three stages</u> - Weakly developed - Moderately developed - Highly developed	<u>Three dimensions</u> - Public-vertical - Public-horizontal - Local governance	<u>Six types of locational policies</u> - Innovation policies - Image building - Business prerequisites - Acquisitions - Coordination - Funds and compensation payments
Causal mechanisms	<u>Structure and agency</u> - Structure: ‘Enabling/constraining’ The Regional Innovation System and the Multilevel Governance arrangements enable and constrain the formulation of locational policies - Agency: ‘Structuring’ Inward-oriented locational policies aim to modify reinforce/reproduce or transform/modify the very structure that enable and constrain them		

### 3.1. Varieties of Capitalism

The institutional strand of the varieties of capitalism (VOC) theory serves as the overarching theory of the analytical framework.<sup>4</sup> By referring to Fritz Scharp’s (1997) influential actor-centered institutionalism, the VOC theory approaches the political economy as a terrain populated by multiple actors, each of whom seeks to advance his interest in a rational way in strategic interactions with others (Hall and Soskice 2001, 6). The original version of the VOC theory by Hall and Soskice (2001) brings firms back into the center of analysis because firms are seen as prototypes of autonomous, rational actors in a globalized economy. A central observation is that firms show a variety of different reactions to the pressures of economic globalization because their reactions are influenced by the different political economies they are embedded in. “Firms are not just going offshore based on cheaper labor cost, they derive the competitive advantage from the institutions in their home country” (Hall and Soskice 2001, 56). The VOC theory establishes the concept of

<sup>4</sup> There exists a neo-Marxist and a neo-institutional strand of the VOC theory (Coates 2005). In the following, I focus on the neo-institutional strand of the VOC approach.

the comparative institutional advantage which proposes “that the institutional structure of a particular political economy provides firms with advantages for engaging in specific types of activities there” (Hall and Soskice 2001, 37).

The VOC theory mainly discusses national institutional differences of political economies. This is justified by an understanding that many of the most important institutional structures – such as labor market regulations, education and training, corporate governance – depend on regulatory regimes that are the preserve of the nation state. Following this spatial fix on the nation state, the VOC theory distinguishes between two ideal types of political economies (Hall and Soskice 2001). First, the Liberal Market Economies (LMEs) such as the US or Canada which coordinate their activities via hierarchies and competitive market arrangements. Market-logic measures such as competition, trade, demand and supply, and formal contracting are the primary tools, but if the market fails to solve a problem, hierarchy comes into play. The second types are the Coordinated Market Economies (CMEs) such as the Netherlands or Switzerland which coordinate their activities through non-market relationship, networks, and collaborative arrangements.

I will adopt two well-established adjustments to the above discussed original version of the VOC theory in order to do justice to the context of SCCs. First, the set of actors can be expanded beyond firms. Although Hall and Soskice illustrate their arguments by mainly referring to firms, they note that the relevant actors may as well be individuals, producer groups, or governments (Hall and Soskice 2001a). Second, I apply a scalar refinement because regional and local authorities are similarly important as the national level in shaping the political economy of a place (Hollingsworth 1998, 493). The mechanisms of institutional entanglements that are responsible for specific economic advantages are similar at the local level and at the national level (Hollingsworth and Boyer 1997; Jonas and Ward 2007; van der Heiden 2010).

Neo-institutionalism and consequentially the VOC theory call into question the convergence hypothesis of globalization that underlies some urban neo-Marxist theories (e.g. urban entrepreneurialism, growth machine, re-scaling) but as well to an extent the global city theory. All these theories argue that cities respond rather uniformly to international economic pressures. On the contrary, the VOC theory argues for a diversity of responses to global economic pressures and especially asks for empirical accounts to illustrate this diversity (van der Heiden 2010, 17). Hence, the fundamental logic of the VOC theory lies in diversity rather than uniformity. While acknowledging that the globalized economy pressures cities in a similar way, this thesis argues that the policy responses are diverse given the specificities of diverse localities

In order to theorize the diversity of policy responses, Hall and Soskice (2001) put forward that the political-institutional setting and the economic orientation of a political economy are the two crucial explanatory factors for strategic decisions of localities. This assumes a necessary coherence between the economic and political setting of a locality. Path-dependent and place-specific processes lead to monopolies of place, which can be conceptualized as place-specific assets that are not to imitate easily elsewhere. This specificity is the basis of the comparative advantage<sup>5</sup> (van der Heiden 2010, 18–19). The competitive economic pressures will lead to a further development of this place-bound and path-dependent comparative advantage because local authorities are concerned to make use, further develop and promote their comparative advantages by formulating locational policies. Alan Harding (1997, 295) sums up nicely the situation of cities in interurban competition: “localities have something to play for and something to compete with”. Neglecting the specificities of a political economy would consequentially rather hinder than foster economic growth (Hollingsworth and Boyer 1997, 36). These ideas of the VOC theory follow the tradition of what Granovetter (1985) calls embeddedness in a specific social system of production. These locally fixed systems of production keep economic processes place-bound in an area of globalization. The embeddedness hence ‘keeps the state in the game’ of competition (Jessop 1998).

In sum, this analytical framework acknowledges the integration of SCCs in a globalized economy, a fact that demands to take powerful structural economic effects into consideration. Simultaneously, the analytical framework accounts for place-specific economic and political characteristics that mediate these structural economic effects. Since all SCCs face similar globalized economic pressures, I propose that the decisive factors in explaining the variety of locational policies are the economic and political-institutional characteristic in which a locality is embedded.

A few related studies support the assumptions of place-specific and path-dependent policy responses to the pressure of economic globalization. Savitch and Kantor (2002, 32) highlight in their seminal book that urban development policies are not formulated on a green field, they “are undertaken within a complex set of economic and political interactions” (Savitch and Kantor 2002, 32). Malecki (2007) discusses how the motivation to draft local economic development policies is similar in different locations but that the concrete policy choices are shaped by place-based

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<sup>5</sup> Wolman et al. (2008, 2) distinguish between ‘comparative advantage’ and ‘competitive advantage’. An area has a *competitive advantage* i.e. an absolute advantage for a particular type of activity, if a firm engaged in that activity can produce and bring to market its product at greater profit than it can elsewhere. *Comparative advantage*, on the other hand, is a term that relates the competitiveness of two or more places with respect to two or more types of economic activity. Competitive advantage implies an absolute advantage, while comparative advantage implies a relative one.

resources and constraints. Uyarra (2010) studies economic development policies in regional innovation systems. She finds that these policies are not drafted “on a *tabula rasa*, but in a context of pre-existing policy mixes and institutional frameworks that have been shaped through successive policy changes. Past policy decisions would constrain the range of options available for current decision makers” (Uyarra 2010, 132; emphasis in the original Kay 2006). Van der Heiden (2010, 10) examines urban external relations in a set of medium-sized European cities. He finds that the concrete forms of these endeavors are dependent on the respective place specific needs and characteristics.

The VOC theory does not further specify how the economic orientation and political-institutional setting may be operationalized. To fill these gaps, I propose to capture economic orientation by the Regional Innovation System concept – an approach that I borrow from economic geography. The political-institutional setting of a locality is captured by the Multilevel Governance approach. The economic orientation and the political-institutional setting should together explain the formulation of locational policies. Locational policies as the phenomena to be explained are captured by a self-developed framework which will be presented in the following subchapter.<sup>6</sup>

### 3.2. Phenomena to be explained: Locational policies

Locational policies as a concept emerged within the urban entrepreneurialism literature in the 1980s (e.g. Cochrane 1987; Harvey 1989). In this context, locational policies were described as competitiveness enhancing strategies and were problematized because they have emerged at the expense of territorial equalization policies (Begg 1999, 805). The urban entrepreneurial literature was not concerned with specific characteristics of locational policies as this literature was merely a critique of emerging urban neo-liberal strategies. Following the urban entrepreneurialism literature, Brenner (2000) relates the term locational policy to the German notion of *Standort* which “refers to a location for capital investment, and implicitly, to the structural competitiveness of that location relative to other possible locations within and beyond the national territory” (Brenner 2000, 319).

Locational policies have later been adapted by the optimistic, neo-classic view on interurban competition. This strand of literature assumes that each city-region has the potential to identify its own competitive niche (Porter 1990; Porter 1995). According to this perspective, locational policies should aim at enhancing the economic competitiveness of the targeted locality by identifying, developing and exploiting place-specific assets. In this strand of research, locational policies are being discussed within the theory of comparative advantage, i.e. Ricardo’s theorem (Ricardo 1817),

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<sup>6</sup> A simpler version of the locational policies framework is presented in Mayer et al. (2016). In Kaufmann and Arnold (2017), we discuss the locational policies framework and apply it to small and medium-sized cities.

which suggests that regions should focus their production on domains in which they are comparatively most competitive. In this logic, local governments should “adapt to this place-specific logic of competitiveness and push political institutions towards the place-specific economic assets of their respective city-regions” (van der Heiden 2010, 21).

In this dissertation, I seek to explain the formulation of locational policies. I have no intention to engage in the debate between the neo-classical and the neo-Marxist strand of urban studies because both traditions agree on the very purpose of locational policies: to enhance the capital flow into the region. More precisely, “the goal of such [locational] policies is clearly to position the city on the global scale of capital circulation by enhancing and presenting its attributes that are considered to be most competitive” (van der Heiden 2010, 10; based on Gordon 1999; Ohmae 2001; Brenner 2004). Place-specific advantages are essential in interurban competition, because they allow for escaping from a fully competitive, and therefore level, global market. In sum, locational policies rely on the identification, the development and the promotion of place-specific assets. Andrew and Doloreux (2012, 1289–90) point out in a study about Ottawa that “developing strategies to build regional attractiveness and foster regional competitiveness are currently high on the political agenda” because there is “a desire on the part of every local government to promote the comparative advantage of their city over other cities”. The concept of locational policies subscribes an active role to local governments. Local government have an enabling role as they can ‘connect and cluster’ multiple actors to address cross-cutting challenges (Bradford and Wolfe 2013; Bradford and Bramwell 2014).

During the course of this subchapter, I propose and discuss an analytical framework of locational policies (see Table 3) that helps to systematically approach the phenomena to be explained. Such an analytical framework is essential because it should do justice to the diverse strategies that cities formulate. Jonas and Ward (2007) highlight that local governments try to enhance the economic competitiveness of their localities by various strategies such as job creation, supporting the growth of small companies, attracting outside investments and new urban governance arrangements. Also political initiatives have the potential to enhance the welfare of a region by coordinating actors, policies and processes (Scharpf 1997; Sager 2005; Sager 2006). Such descriptions of broad ranges of policies highlights that locational policies appear in complex bundles, do not occupy a narrow policy domain and are not operating isolated from each other as they are often mutually dependent (Uyarra 2010, 132). Enhancing the economic competitiveness of a locality can be done by a broad range of policies. These policies which can be subscribed as oriented towards economic-development expanded substantially (R. Young 2012, 18).

As I have outlined, locational policies are not easy to identify, distinguish and categorize. As a consequence, the concept of locational policies is undertheorized. To my knowledge, no research tradition or scholar did systematically approach locational policies. Therefore, I suggest a relatively rich catalogue of possible locational policies that simultaneously brings some order into the concept.<sup>7</sup> I will apply a policy analysis perspective that is interdisciplinarily informed by theories of economic geography and political science. The locational policies framework consists of six distinctive categories, namely *innovation policies*, *image building*, *business prerequisites*, *acquisition*, *coordination*, and *public funds and compensation payments*. The categories are distinguished by policy orientation (inward vs. outward) and policy domain (economic vs. political). The economic category is furthermore divided into soft vs. hard factors. Inward and outward oriented policies differ in their function. Whereas inward oriented policies are strategic tools to develop the local assets of the political economy, the outward oriented locational policies try to promote and market the locality, attract various outside-produced resources and generally strategically position a city in the interurban competition.

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<sup>7</sup> I am aware that the locational policies framework does not cover all possible locational policies. For example, the locational policies framework does not include human capital oriented policies such as creative class theory suggested by Florida (2005) or place-based development policies (Neumark and Simpson 2014).

Table 3 : Locational policies framework

Policy domain	Policy orientation	
	Inward	Outward
Economic	<b>Soft factors</b> <b>Innovation policies</b> Recipient: Regional Innovation System Tools: Clusters, start-up promotion, investing in the knowledge infrastructure, venture capital Aim: Developing and diversification of the Regional Innovation System by fostering interaction of all actors	<b>Image building</b> Recipient: wide audience, everybody who listens Tools: Place branding, location marketing and promotion Aim: Improving the reputation of the region, attraction of talent and guests
	<b>Hard factors</b> <b>Business prerequisites (taxes and infrastructure)</b> Recipient: Local/regional economy Tools: Taxes, land and real estate Aim: Creating a favorable business environment	<b>Acquisition</b> Recipient: Firms, investors, residents, and research institutes Tools: Acquisition of investment, firms, residents universities/research institutes Aim: Attracting mobile capital, jobs, taxes and innovation
Political	<b>Coordination</b> Recipient: Agglomeration jurisdictions, higher-tier political entities, local business elites Tools: Coordination organizations, networks, and platforms Aim: Coordinated locational policies, creating positive synergies	<b>Public funds and compensations payments</b> Recipient: Higher-tier political entities Tools: Compensation payments, applying for public funds Aim: Justifying and increasing public funds and compensation payments

### 3.2.1. Innovation policies

Innovation policies are an essential feature of the Regional Innovation Systems concept (see subchapter 3.4). The overall aim of innovation policies is to improve the capabilities and performances of local firms as well as the general business environment (Doloreux and Parto 2005, 135). Especially the transfer and share of knowledge between relevant industries, knowledge generating institutions (e.g. universities, research institutes) and public actors are crucial in fostering innovation. These three types of actors are also known under the concept ‘triple helix’ (Etzkowitz and Leydesdorff 1995). Consequentially, innovation policies aim to strengthen linkages between these actors within a region and thereby foster knowledge spillovers. According to Doloreux (Doloreux 2002) innovation policies “are intended to improve interactions between the knowledge infrastructures, firms, and institutions”. Thereby, local governments may act as “local brokers to ‘connect and cluster’ researchers, firms and talent” (Bradford and Wolfe 2013, 11).

Cluster strategies are classic examples of innovation policies. The aim of clusters is to create spatial concentrated networks of firms that produce similar or related products or practice Research & Development (R&D) in similar areas (Porter 2000, 254). The presence of a cluster does not automatically stimulate economic development. “Many of the competitive advantage of clusters depend on the free flow of information, the discovery of value-adding exchanges or transactions, the willingness to align agendas and to work across organizations, and strong motivations for improvement” (Porter 2000, 264). Local governments may stimulate knowledge interaction within a cluster. Cluster-oriented innovation policies may support and incentives R&D, organized specific training, create cooperative networks, foster knowledge exchange between cluster entities and so on (Martin and Sunley 2003, 23–24; Cumbers and MacKinnon 2004, 959).

Further examples of innovation policies are the support of start-ups by setting-up incubators and accelerators. Incubators offer an ideal environment for start-ups by providing office space below market-rates, consulting services in legal and administrative tasks, providing access to networks of investor and by stimulating knowledge exchange with bigger firms and other start-ups. Similarly, so-called accelerators support young firms that outgrew the start-up phase tailored to their level of development before they operate fully independent. In this regard, accelerators usually act as early-stage investors that provide seed capital to growing firms. Another innovation policy is the provision of public venture capital. When venture capital is lacking, different governmental entities may step in by providing public funds. Public funds may set specific sector requirements or may have other kinds of strings attached. An often used practice to minimize the risk in these kinds of

innovation investments is that public funds only step in if private investors are providing matching funds.

Innovation policies are also concerned with developing knowledge infrastructures. The role of universities in economic development is nuanced and complex. Universities are not direct engines of economic development (Florida and Cohen 1999). Universities can certainly be drivers for innovation but more indirectly by educating talent than by producing inventions. Thus, the research function of universities has generally been overstated by academics and practitioners while the teaching function i.e. the role in educating talent, has been underappreciated (Motoyama and Mayer forthcoming). The establishment of research universities enriched with science parks, technology transfer and commercialization programs, and university-based venture capital funds is helpful but not sufficient in promoting economic development. Universities should be considered as important underlying components of the regional knowledge-creation infrastructure and not as direct drivers of innovation (Mayer 2007, 50).

### 3.2.2. Image building

Image building strategies “include branding exercises, hosting cultural initiatives, tourism promotion, and even immigration campaigns” (Harvey 2012, 4). Image building and place-marketing are tools to increase the competitiveness of places and are often tailored to specific target groups such as tourists, prospective residents, talent and investors (Eshuis, Braun, and Klijn 2013, 507; Harvey 2012, 3). Image building has nowadays become almost a necessity for public authorities in order to position their city in a global market by projecting specific images about the locality to the world (Harvey 2012, 8; Eshuis, Braun, and Klijn 2013, 507). Hannigan (2003, 353) links image building to the “new entrepreneurial style of local economic development in which image promotion was privileged as being central by planners and politicians”. Jean Harvey and Robert Young (Harvey and Young 2012) conclude in their book about image building in Canadian municipalities that the force of globalization with its economic restructuring and fiscal crises of cities may explain the increasing branding activities of cities, smaller towns and even rural villages.

Whereas place branding is about creating and promoting a unique and positive image about a place, place marketing as a broader tool refers to the application of marketing instruments to geographic locations (Eshuis, Braun, and Klijn 2013, 508). Braun (2003, 43) defines place marketing as “the coordinated use of marketing tools supported by a shared customer oriented philosophy, for creating, communicating, delivering, and exchanging urban offerings that have value for the city’s

customers and the city's community at large". In that sense, marketing is more about responsiveness to target groups than persuasion (Eshuis, Braun, and Klijn 2013, 508).

When formulating image building strategies, it is essential to position the localities with attributes that are hard to imitate elsewhere in order to avoid a level playing field with other potentially more powerful cities. Thus, image building should be guided by considerations of locational substitutability. "The lower the locational substitutability of these place-bound assets, the harder they can be imitated by others and the stronger the region's position is in the (...) global economy" (van der Heiden and Terhorst 2007, 242).

Image building in SCCs may be pursued along two dimensions if it is guided by considerations of locational substitutability. First, the capital city status is probably the most obvious attribute to be exploited by an image building campaign because it guarantees singularity on the national level. Given the target group of the image building campaign, SCCs for example may link the capital city status to the quality of life, the presence of historical sites, monuments and parks. Second, SCCs may also try to build an image as a specific sort of business towns. Such an image building strategy would not target guests and tourists, but rather firms in highly regulated and knowledge-intensive sectors that profit from the unique political economy in a capital city. Hence, SCCs could highlight their specific knowledge-intensive economy, the presence of national government organizations and its highly educated workforce in economic orientated image building campaigns.

### 3.2.3. Business prerequisites

Compared to the so-called 'soft' innovation policies, business prerequisites may be categorized as 'hard factors' as this category is tangible and easier to measure. The optimization of a diverse set of taxes (the most important are property taxes and personal and corporate income taxes) as well as the availability and cost of land and real estate are seen as prerequisites for a vital regional economy.

Not all local governments have the competences to alter the same set of policies in this category. Tax autonomy varies considerably given different national tax regimes (see also subchapter 3.5.1). By referring to Mike Goldsmith (1995, 236; 2012, 137), I distinguish between two different archetypes of national tax regimes under which local governments operate. On the one hand, local governments are allowed to collect corporate and personal income taxes as well as property taxes which stands for high local tax autonomy. On the other hand, low local tax autonomy stands for national tax regimes that allow local governments to collect taxes only on property and land. In an average OECD country, property taxes are the most important raised local tax revenue (43%).

Personal income tax makes up 21% of the local tax revenue and corporate income tax makes up 5%. In countries with a high local tax revenue, personal income tax rises up to 42% of the local tax revenue whereas property taxes decrease to 25% and corporate income tax makes up 5% (Brühlhart, Bucovetsky, and Schmidheiny 2015, 1137).<sup>8</sup>

Thus, in a context of low local tax autonomy, property taxes often constitute the biggest independent revenue source of municipal budgets. In such a context, the availability and cost of land and real estate becomes a major concern of local governments. Local governments are trying to increase the availability and value of land through land-use planning, providing databases of vacant real estate, incentivizing renovations and infrastructure up-dates and sometimes developing and managing own business complexes. An advantage of low fiscal autonomy is the relatively high independence upon private capital which can offset business bargaining advantages (Kantor, Savitch, and Haddock 1997, 351). On the other hand, such a tax regime generates fewer incentives to use local economic development as a generator of supplementary revenues (Kantor, Savitch, and Haddock 1997, 356). As a compensation for low local tax autonomy, local governments receive substantial transfer payments from higher-tier governments to sustain their budgets (see subchapter 3.2.6).

In regimes with a high local tax autonomy, local governments have the competencies to operate with tax abatements and lowering the tax rates in order to lure residents and firms into their jurisdictions. Such tax regimes create incentives to engage in local tax competition over mobile tax bases. Thus, local tax competition may lead, on the one hand, to beggar-my neighbor behavior vis-à-vis municipalities in the regions such as poaching firms and targeting residents from neighboring localities (Keating 1995). On the other hand, local tax competition may lead to lean and efficient public administrations as they feel the pressure to reduce their spending enabling them to lower their tax rates (e.g. Tiebout 1956; Tannenwald 1996).

#### 3.2.4. Acquisitions

Acquisitions refer to strategies that should enlarge the tax base not by organic growth but by acquisition of firms, new residents and mobile capital. Acquisitions are a big business. Local development agencies try to actively acquire companies and mobile capital around the globe. Local governments may commission the services of specialized brokers. To initiate contacts to potential

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<sup>8</sup> Additionally, the consumption tax constitutes 21% of the local tax revenue both in the average OECD country and in the average OECD country with a high local tax autonomy. In both kind of countries, other types of taxes make up 7-8% of the local tax revenue (Brühlhart, Bucovetsky, and Schmidheiny 2015, 1137).

relocating firms, local governments or their contractors may directly approach firms with inquiries or already tailored propositions. Such contacts may be initiated at exhibits or trade shows. Sometimes brokers initially negotiate with side-locators that work in the mandate of firms. Local governments and the potentially relocating firms may only come into play in the further steps of negotiations. Often, specific tax incentives, land deals or reduced real estate costs are part of the ‘acquisitions package’. The rationale behind acquisitions may be to lure companies into the region that fit to the already existing clusters and industries because the cluster should grow qualitatively and quantitatively. Ideally, acquisition benefits already existing firms. However, there is no doubt the some acquisitions simply aim for increasing their tax bases or job growth without intentions to substantially strengthen their clusters.

In SCCs, such acquisition strategies may highlight the unique characteristics of a capital city economy for firms that operate in highly regulated and knowledge-intensive markets such as biotechnology, education, aerospace, and security. Such firms need spatial proximity to federal institutions to be close to the regulators or to further develop and streamline their products. Federal institutions for their part need private expertise to develop and implement high-technological projects and services (Mayer, 2013; Mayer and Cowell, 2014). This mutual pull effect may be a decisive argument in the strategies of acquiring firms to SCCs. The same logic applies to the acquisition of universities and research institutes, but they are not as mobile as firms because public funds are part of a funding mix that make the interests more diverse and more complex in relocation negotiations.

### 3.2.5. Coordination

Coordination aims to ensure policy coherence between different actors that engage in policy formulation. As Sager (2005; 2005) demonstrates, coordination can be theoretically approached with Fritz Scharpf’s (1994) welfare theoretical concept. “[Coordination] is considered desirable whenever the level of aggregate welfare obtained through the unilateral choices of interdependent actors is lower than the level which could be obtained through choices that are jointly considered” (Scharpf 1994, 27). A distinction between three manifestations of coordination helps to approach this locational policies category (see also Kaufmann and Sager 2018). Positive coordination describes the proactive search for synergies higher than achieved by individual action. The synergies of positive coordination should allow for the compensation of losses of negatively affected actors (Scharpf 1994). Negative coordination means the mere avoidance of contradictory action and redundancies without actively generating synergies (Scharpf 1994). Competition or beggar-my-neighbor policies would be the worst case scenario of coordination (Keating 1995, 120). I consider

competition or beggar-my-neighbor behavior as well as the absence of coordination as a failure of coordination.

Effective coordination is often not achieved through top-down institutional consolidations but rather through cooperative arrangements, mostly ad-hoc sometimes institutionalized, that stabilizes networks of policy-relevant actors (Kübler and Heinelt 2005; Sager 2005; Sager 2006). Such coordination forms are based on the voluntary involvement of its members without any effective way of policy enforcement. Examples are regional coordination platforms, policy networks, interlocal service agreements and public-private partnership that often occur as alternatives to formal coordination bodies. These examples show that coordination efforts target a wide range of actors and are not limited to public actors.

Regional coordination, as a central element of this locational policies category, studies coordination of policies between jurisdictions within a functional urban area (FUA). Regional coordination in FUAs is conditioned by the mismatch between functional regions and jurisdictional territories as reforms of the jurisdictional boundaries are not keeping up with the accelerated pace of urban sprawl (Kübler 2012, 403). According to Frederickson (1999, 706), the interdependency of jurisdiction, organizations and institutions is the densest in metropolitan areas that makes coordination necessary and meaningful.

Morgan (2014, 314) points out that the agenda mostly contains the policy fields of economic development, transportation and spatial planning issues. In a comparative analysis, Kübler and Piliute (2007, 365) suggest that a metropolitan-wide commonality of interest regarding its economic promotion is likely to exist. Feiock, Steinacker and Park (2009, 256) point to large potential benefits of cooperation in economic development. Local governments engage in interaction to capture spillover effects from growth if the gains of cooperation are likely to outweigh the transaction costs necessary to achieve it (e.g. Ostrom 1990; Feiock, Steinacker, and Park 2009; Kwon and Feiock 2010). However, the transaction costs are correspondingly high and collective action problems such as incentives to free-ride and opportunistic defections from voluntary agreements exist. Furthermore, the two step logic of a firm's locational choice – the first step consisting of a regional choice and the second and later step consisting of deciding on a specific location within the chosen region (Cohen 2000) – aggravates regional coordination. This reveals the double logic of competition: Competition within a region is a threat for economic competitiveness in the competition between regions.

### 3.2.6. Public funds and compensation payments

This locational policy type aims at justifying and increasing monetary transfers within a nation state. Important instruments are intergovernmental monetary transfers that may be unconditional or earmarked for a specific policy field. Local governments also have the opportunity to tap into national or regional public funds that for example support big infrastructure project or specific industries.<sup>9</sup> National fiscal equalization schemes are also part of this category, however, they mostly base on non-negotiable allocation formulas.

In the context of SCCs, compensation payments based on restrictions ensuing from the capital city status are particularly relevant. Studies distinguish between two types of compensation payments in the context of capital cities (G. Young 2008; Slack and Chattopadhyay 2009). First, some capital cities have negotiated compensation arrangements regarding specific additional expenses of capital cities such as additional policing due to more special events, preserving objects of national representations, hosting cultural events and maintaining a high-quality infrastructure. In some capital cities, these additional services of national importance are directly rendered by national governmental organizations such as national planning committees. Second, some capital cities are being compensated for lost revenues due to extraordinary constraints on their local tax autonomy. The most important compensation is payments in lieu of tax-exempted property. Local governments are not allowed to levy taxes on land and buildings belonging to the national government as well as land and buildings of foreign governments (such as embassies or consulates). This restriction affects capital cities in a more profound manner than other local governments in a country. To compensate for these lost taxes, some nation states know payments in lieu of property taxes (the so-called PILTs) while other nation states compensate via lump sum payments.

Given that this locational policy targets public funds, a local government has to bring political arguments into play, i.e. to emphasis its importance for the whole political system. Cities are able to claim national importance in different ways. Larger cities can simply refer to their economic importance for the whole country. Smaller cities may highlight their role as regional centers for peripheral areas or as secondary centers in metropolitan areas (Kaufmann and Arnold 2017, 11). SCCs, for their part, are able to claim national importance by referring to their functional role as the political center. They can claim a special status in the national urban competition by arguing that the capital city should not be measured by economic success only, but by its function as the place where the political decisions are being made and implemented, which in turn help other metropolitan areas to prosper. However, such strategies feature a preservative rather than a

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<sup>9</sup> For European cities exists as well EU funds. An example is the European Regional Development Fund that supports modernization projects in order to increase regional competitiveness. A newer funding instrument is the Smart Cities and Communities European Innovation Partnership that supports technology-intense projects.

proactive development logic and thus may leave SCCs dependent on the nation state. Jessop and Sum (2000, 2293) assess such strategies as being unsustainable in the long term and furthermore “pose an awkward dilemma over the trade-off between maintaining local autonomy and accepting resources that come with restrictive strings attached”. Especially if we additionally consider the ‘flypaper effect’ suggesting that intergovernmental transfer payments are stimulating local government spending to a greater degree than the increase of locally raised income would “since the money that the government sends out ‘stick where it hits’” (Hines and Thaler 1995, 218; Good et al. 2012). As a consequence, these attracting public funds or compensation payments strategies should be accompanied by other locational policies.

### 3.3. Causal mechanisms

Before I turn to discuss the two explanatory factors (RIS and MLG setting), I will outline the two causal mechanisms that should explain the formulation of locational policies. I name the causal mechanisms ‘enabling/constraining’ and ‘structuring’. These two causal mechanisms underlie the expectations that I will derive in the two following subchapters and therefore should be addressed before the discussion of the two explanatory factors.

Generally speaking, the urban politics literature offers three broad causal mechanisms reflected in the three main analytical approaches of urban political studies. First, the structural-institutional tradition, also labeled as neo-Marxist, emphasizes the pressures and coercive forces of a globalized economy that converges urban forms, urban governance and urban policies. Cities are forced into certain configurations of activities which are seen as constitutive of the capitalist dynamic and/or part of the neoliberal offensive to dismantle redistributive state institutions (Harvey 1989, 15; Lovering 1999, 392).<sup>10</sup> Second, agency-based studies contrast structural explanations as they highlight the importance of individual or group actions when explaining urban politics and urban policies. This strand of literature focuses on urban power structures and asks how such power arrangements are being produced, maintained and could be transformed.<sup>11</sup> Third, the urban governance literature incorporates both structural and agency-based explanations (Devecchi 2016, 57–58). In that sense, structure and agency based studies are a compromise, or positively formulate an advancement as they bridge two opposing camps in urban political studies. The urban governance literature is relatively newer and is for the most part based on comparative case

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<sup>10</sup> This tradition features prominent scholars such as Lefebvre (1991 [1974]), Logan and Molotch (1987), and Harvey (1989). Newer contributions in this tradition seem to emerge under the label of critical urban theory (Brenner, Marcuse, and Mayer 2012) or critical urban studies (Imbroscio and Davies 2010).

<sup>11</sup> Influential are studies by Hunter (1953), Dahl (1961) and Stone (1989) which all analyze the interplay between local public and local private actors in cities. I discuss the importance of these studies in subchapter 3.5.3.

studies.<sup>12</sup> To incorporate the simultaneity of structure and agency became the state of the art in urban political studies.

To acknowledge the simultaneity of structure and agency, I propose to incorporate two causal mechanisms into the analytical framework that I call ‘enabling/constraining’ and ‘structuring’. The former mechanism is influenced by neo-institutional theories such as the actor-centered institutionalism (Mayntz and Scharpf 1995; Scharpf 1997) or the institutional analysis and development framework (Ostrom 1990; Polski and Ostrom 1999). The ‘enabling/constraining’ mechanism highlights that institutions are enabling and constraining actors’ actions but are not determining them. For example, Fritz Scharpf (1997, 36) stresses that “political interaction is driven by the interactive strategies of purposive actors operating within institutional settings that, at the same time, enable and constrain these strategies”. This neo-institutional mechanism also influences the VOC theory as it emphasizes “that (institutional) structure conditions (corporate) strategy, not that it fully determines it” (Hall and Soskice 2001, 15). Translated to the context of this thesis, the economic structure (i.e. the RIS) and the political-institutional structure (i.e. the MLG setting) enable and constrain the formulation of locational policies choices.

The first causal mechanism leaves us so far with a rather static and deterministic analytical framework because the causal mechanism assumes an unidirectional influence between structures and actors’ choices. This is unsatisfactory, as local policy makers would not be equipped with agency. Therefore, in order to theoretically approach local action, I suggest incorporating a second causal mechanism that is called ‘structuring’ (Giddens 1984). The structuration theory proposes a dualistic view of the structure-agency relationship. The dualistic view argues that “the broader structural context shapes individual action, but also contends that these actions in turn shape that structural context” (Imbroscio 1999, 46). The dualistic view follows Abrams (1982) and Giddens (1984) who both refer to a reciprocal and constant process between structure and agency. Also Clarence Stone (Stone 1989, 10) draws on Abrams (1982) when he states that “action does not simply occur within the bounds set by structures but is sometimes aimed at the structures themselves”. ‘Structuring’ highlights that actors’ actions can be directly aimed at the very structures that are simultaneously enabling and constraining them. Imbroscio (1999, 49) points out that agency can have two effects on structures: “they can either reproduce/reinforce structures or they can modify/transform structures”.

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<sup>12</sup> The urban governance stand of literature features studies such as Kantor, Savitch and Haddock (1997), Di Geetano and Klemanski (1999)(1999), Pierre (1999; 2011), Sellers (2002), and Savitch and Kantor (2002). See Devecchi (2016, 57–66) for a good overview of urban governance studies.

Thus, I incorporate agency into the analytical framework by formulating expectations based on the ‘structuring’ as their causal mechanism. Locational policies may aim at specific parts of the RIS and the MLG setting that are modifiable by policies of local governments. I expect that local governments try to reproduce or reinforce enabling parts of the RIS and the MLG setting. On the other hand, local governments try to modify or transform constraining parts of RIS or MLG setting. In sum, I expect that local governments are able to influence parts of the structures that are constraining or enabling them by formulating and implementing locational policies.

Inward-oriented locational policies are able ‘to structure’. These types of locational policies are strategic and anticipatory policy options. However, just few inward-oriented locational policies have the potential for ‘structuring’. In the following subchapters, I will outline that innovation policies have the potential ‘to structure’ the RIS and coordination has the potential ‘to structure’ the MLG setting. This is a problem-oriented approach on public policy because innovation policies aim at RIS failures and coordination tries to overcome constraints ensuing from the MLG structure. The inward-orientated locational policy ‘business prerequisites’ is not able ‘to structure’. These locational policy manifestation, i.e. taxes and land and real estate, are not able modify or reinforce the MLG setting.

### 3.4. Explanatory factor 1: Regional innovation system

The regional innovation system (RIS) concept evolved in the economic geography literature (Cooke 2001; Doloreux and Parto 2005; Asheim, Smith, and Oughton 2011). A RIS is typically understood as “a set of interacting private and public interests, formal institutions, and other organizations that function according to organizational and institutional arrangements and relationships conducive to the generation, use, and dissemination of knowledge” (Doloreux and Parto 2005, 134–35). Two subsystems constitute a RIS (Autio 1998; Tödting and Trippel 2005). First, the knowledge application and exploitation subsystem “comprised out of companies, their clients, suppliers, competitors as well as their industrial cooperation partners. These constellations are usually referred to as industrial clusters of a region” (Tödting and Trippel 2005, 1205). In this regard, the RIS literature points out that a RIS may encompass several clusters (Asheim, Smith, and Oughton 2011). Second, the knowledge generation and diffusion subsystem is constituted by various organizations that engage in the production and diffusion of knowledge and skills such as research institutions, technology mediating organizations, as well as universities. A basic assumption of the RIS concept states that the better a RIS is developed, the more intense the flow or exchange of knowledge, resources and human capital within and between the subsystems (Tödting and Trippel 2005, 1206).

Locational policies are unknown to the RIS literature. Quite generally, the RIS concept remains vague about potential policies that aim at enhancing the competitiveness of regions and takes a rather conservative stand on policy interventions by (local) governments (Mayer et al. 2016, 14). Some authors argue that public policies should only be adopted to overcome market and system failures (Asheim, Smith, and Oughton 2011; Cooke 2001; Martin and Trippel 2014). As a result, private actors must fail first in order to legitimate state interventions. In this regard, Tödting and Trippel (2005) argue that systemic failures ought to be the foundation for policy interventions but they simultaneously highlight that policy actors, such as local governments or economic development agencies, may have a powerful role in shaping a RIS if they are provided with enough autonomy and resources. The economic geography literature labels such policy instruments innovation policies (Cooke, Boekholt, and Tödting 2000; Martin and Trippel 2014; see also subchapter 3.2.1).

To integrate the RIS literature into the analytical framework, I will first describe how a RIS in a SCC may look like. In a next step, I propose three development stages of a RIS which are based on potential RIS failures. In the following, I will theorize the relationship between the RIS and different categories of locational policies and formulate expectations how the RIS enables and constrains the formulation of these locational policies categories.

#### 3.4.1. How does a RIS in a SCC look like?

SCCs should display a distinctive type of RIS in which government institutions such as ministries, departments or public agencies constitute an additional type of actor that interacts with both RIS subsystems. Warland (2016c) argues that public procurement processes are a specific feature that shape the knowledge dynamics in SCC-RISs. In the knowledge-based SCC-RISs, central government organizations heavily rely on products and services that are provided by private sector firms. The provision of such products and services creates complex interaction patterns between public demand and private supply. Whereas government actors are associated with constrained procedures, risk-aversion, an innovation obstructing culture of bureaucracy and arm's-length relationships, the private sectors is usually grasped as innovative, risk-taking and technology embracing. In SCCs, this two cultures meet and thus, according to Warland (2016c, 2), a RIS in a SCC “need[s] to function as bridges between both sectors and need[s] to help to overcome gaps between both paradigms.” Such a RIS description fits Markusen’s (1999) conceptualization of ‘state-anchored industrial districts’. In such districts, government entities such as military installations or clusters of government offices and agencies operate as anchors for private sector firms that interact with these entities (Markusen 1999).

The setting of actors within the two RIS subsystems are unique in a SCC compared to other regional economies (Warland 2016c). First, actors in the knowledge application and exploitation subsystem are firms that seek spatial proximity to governmental actors. In particular, firms that provide so-called knowledge-intensive business services (KIBS) benefit from being close to their public sector clients (Vence Deza and González López 2014).<sup>13</sup> Such KIBS firms tend to locate in SCCs because they seek spatial proximity to governmental actors and similar firms, competitors and anchor organizations resulting in cluster-building. Spatial proximity facilitates intended and unintended interactions that are conducive for the development of trusted relationships in which knowledge is shared (Feldman 2001). Besides the importance of public procurement, a RIS in a SCC features specific sectors that are linked to the federal presence which I call ‘highly regulated sectors’. Examples are the energy sector, defense and security, health and medicine, education and so on. In these sectors the governmental organizations are important as regulators but may as well be buyers of products and services via public procurement processes.

Second, the actors in the knowledge generation and diffusion subsystem take over intermediary functions or knowledge generation functions. The former functions are conducted by intermediators such as national sector associations, chambers of commerce, or public or semi-public development agencies which organize cumulative knowledge sharing among different actors and coordinate collective actions (Maennig and Ölschläger 2011). Whereas the contribution of more privately orientated associations or chambers of commerce relies on stimulating systemic knowledge flows rather than linking individual actors (Edler and Yeow 2016), public oriented economic development agencies may initiate linkages between the important actors in a sector and thus can offer bridging functions (Lagendijk and Cornford 2000). The knowledge generating actors are public research institutes, think tanks, and university institutes. Such knowledge organizations are important for creating iterative knowledge processes (Caniëls and van den Bosch 2011) but as well for educating talent, a function that may be most important for a region (Motoyama and Mayer forthcoming).

### 3.4.2. Stages of a SCC-RIS

In line with neo-institutional theories, I grasp the development of a RIS as a path-dependent process which is based on the preexisting economic-sector mix, the interactions and knowledge

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<sup>13</sup> KIBS are defined as “services that involve economic activities which are intended to result in the creation, accumulation or dissemination of knowledge” (Miles 2005).

flows between the actors within and between the subsystems, the public procurement processes in the case of a SCC and, last but not least, locational policies. Whereas the RIS literature offers many descriptive insights about collective learning processes and mechanisms within a RIS, relatively little is known about the overall development and evolution of RIS (Boschma and Fornahl 2011). In the following, I outline a model of RIS development by building on three different RIS failures, namely (1) organizational thinness, (2) fragmentation and (3) lock-in (Isaksen 2001; Nauwelaers and Wintjes 2003; Tödting and Trippel 2005).

First, organizational thinness refers to an imperfect or underdeveloped organizational set up. Such a lack of relevant actors in the two RIS subsystems has negative effects on the innovation potential of the region (Tödting and Trippel 2005, 1207). Second, fragmentation refers to the lack of knowledge flows within a region (Blažek et al. 2011). The very definition of a RIS emphasizes the need for intensive interactions between and within the RIS subsystems in order to generate, use and disseminate knowledge (Doloreux and Parto 2005; Tödting and Trippel 2005).<sup>14</sup> Third, lock-in refers to a too narrow focus on regional knowledge sources in regional knowledge flows. Actors in such a setting would be too strongly orientated towards activities that take place within a RIS, ignore relevant external developments and are thus ‘overembedded’. Warland (2016c) shows that knowledge dynamics in SCC-RISs differ, but all are threatened by a regional lock-in. Knowledge dynamics are limited between a rather stable set of actors within the region because public procurement processes creates several barriers for new firms to enter the marketplace. New firms that want to engage in public procurement would have to invest in workforce training to cope with the complexity of procurement processes, may obtain security clearances and are likely to have some unsuccessful bids before they win the first federal procurement contract. Thus, RIS in SCCs do not vary regarding the failure lock-in.

Given these three criteria, I construct three RIS development stages – weakly developed, moderately developed, highly developed – in the context of SCCs (see also Mayer et al. 2016).<sup>15</sup> In a weakly developed RIS, all RIS failures can be detected. In a moderately developed RIS only one RIS failure is present whereas a highly developed RIS is not concerned with organizational thinness or fragmentation (see Table 4).

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<sup>14</sup> The RIS concept is based on a system of innovation approach (Edquist 1997) that emphasizes the evolutionary, non-linear and interactive process of innovation and requires intensive communication and collaboration between different actors (Tödting and Trippel 2005, 1205).

<sup>15</sup> However, such a development is by no means linear in nature. Spigel (2011) uses Ottawa as an example to demonstrate how capital regions can be thrown back due to external shocks.

Table 4: Conceptualization of RIS stages in SCCs

RIS failures	Weakly developed RIS	Moderately developed RIS	Highly developed RIS
Organizational thinness	Yes	One of the two RIS failures present	No
Fragmentation	Yes		No
Lock-in	Yes	Yes	Yes

### 3.4.3. Expectations

Generally, I expect that the different RIS stages constrain or enable the formulation of innovation policies, image building strategies and acquisition strategies. Additionally, innovation policies may be tailored to the specific needs resulting from the RIS by reinforcing/reproducing enabling parts of the RIS or by modifying/transforming constraining parts of the RIS. Table 5 summarizes the expectations based on the RIS as the explanatory factor.

Table 5: Expectations based on RISs

Locational policy	Causal mechanism	Expectations
Image building	Enabling/ constraining	A moderately or highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy. A weakly developed RIS enables the formulation of a capital city image building strategy, but constrains the formulation of a business town image building strategy.
Acquisition	Enabling/ constraining	A moderately or highly developed RIS enables the adaption of a profound and large-scale acquisition strategy. A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy.
Innovation policies	Enabling/ constraining	A moderately or highly developed RIS enables the formulation of innovation policies. A weakly developed RIS restricts the formulation of innovation policies.
Innovation policies	Structuring	Innovation policies aim at modifying and transforming the constraining parts of the RIS.

- Image building in a capital city happens along two dimensions that are not mutually exclusive. On the one hand, SCCs may rely on their uniqueness as the capital of a nation state, on the other hand, they may highlight their specific capital city economy. I expect that if a RIS in a SCC is only weakly developed, the image building strategy centers around the capital city status because an image as a vibrant and competitive economy is simply not credible. This strategy guarantees singularity in the national urban system and moves the focus away from its economic inferiority and towards its political superiority. On the other hand, if a RIS in a SCC is moderately or highly developed, image building strategies on

both dimensions are likely to be enabled: Towards the central government but as well towards guest and tourist, SCCs may present itself as the nation's capital. Towards firms and organizations that have an interest to tap into the knowledge flows of a SCC-RIS, local governments may refer to its unique regional economy.

- The expectation regarding acquisition strategies is similar. This make sense as image building and acquisition are both outward-economic locational policies. Only if a RIS is moderately or highly developed, SCCs may formulate profound and large-scale acquisition strategies. On the contrary, when a RIS is weakly developed, SCCs might not be able to compete in acquisitions with top-tier cities. Thus, I expect that if a RIS is moderately or highly developed, I will detect profound and large-scale acquisition strategies. Consequentially, I expect that a weakly developed RIS constrains the formulation of profound and large-scale acquisition strategies.

Regarding innovation policies, I formulate two rather opposing expectations. The difference lies in the underlying causal mechanisms ('enabling/constraining' vs. 'structuring') and thus in the direction of causality.

- On the one hand, the formulation of innovation polices may be constrained or enabled by the development of the RIS. This expectation is derived from the system of innovation approach (Edquist 1997) that emphasizes the evolutionary, but non-linear and interactive process of innovation that requires intensive communication and collaboration between different actors (Tödting and Trippel 2005, 1205). Thus, I expect that only in moderately or highly developed RISs, innovation policies may be enabled whereas in a weakly developed RISs, the formulation of innovation policies may be constrained.
- On the other hand, innovation policies may be strategic locational policies as they aim to develop the local economy. Innovation polices can directly aim at the needs and problems resulting from a RIS, i.e. they may directly address RIS failures (Cooke 2001; Tödting and Trippel 2005; Martin and Trippel 2014). Different innovation policies may be able to launch, initiate and stimulate the development process of a RIS, i.e. to elevate the RIS to the next stage as they help to overcome RIS failures. Thus, I expect that innovation policies aim at modifying and transforming the constraining parts of the RIS.

The above outlined expectations are interdependent. Only a well-developed RIS enables to take full advantage of both outward-economic locational policies. If a SCCs features only a weak developed RIS, I expect that the only outward-economic locational policy left is to rely on the capital city image. However, if we incorporate innovation policies, the expectations become more dynamic. Innovation policies as strategic, inward-oriented locational policies may have the potential

to overcome the constraints ensuing from the RIS. Thus by helping to develop the RIS, innovation policies may foster the economic conditions necessary to enable the formulation of both dimensions of an image building strategy as well as a profound and large-scale acquisition strategy.

### 3.5. Explanatory factor 2: Multilevel governance

I apply the multilevel governance (MLG) theory to tackle the political-institutional setting in which a locality is embedded in. The multilevel part of the term MLG is important in the context of capital cities as it enables to incorporate the different layers of governments that intersect in a capital city like in no other type of city (Campbell 2000, 10). The governance part of the term MLG allows to capture the interactions between local governments and private actors that engage in locational politics and locational policies formulation.

Hooghe and Marks (2003) article has been important in pushing forward the MLG theory. They theorized decision-making with multiple intervening actors on multiple scales without a structuring authority.<sup>16</sup> Following Hooghe and Marks (2003), Kübler and Pagano (2012) and Horak and Young (2012) adapt the MLG concept to urban political studies. Kübler and Pagano (2012) highlight three dimensions on which local governments may operate: Vertical, horizontal, and international. The vertical nesting of cities is especially important for comparative studies because it allows to incorporate contextual elements and national variations into the analysis (see also Denters and Mossberger 2006). The horizontal nesting of cities within wider agglomerations or metropolitan areas capture how “individual cities have increasingly become entwined in functional interdependencies that contribute to the shaping of politics and governance within them” (Kübler 2012, 115). The international dimension looks at international relations of cities that aim at strengthening the economic competitiveness of cities by tapping into international markets and by trying to influence decision-making in multilateral organizations. Horak and Young (2012) use a similar conceptualization in their volume of multilevel governance arrangements in Canadian cities. They propose two dimensions to tackle MLG. On the one hand, a vertical dimension that analyzes the interactions between multiple governmental levels in policy-making. On the other hand, the governance dimension that refers to the involvement of non-governmental actors in the policy-making process (Young 2012, 5 -6). Consequentially, MLG is defined in the same volume as “a

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<sup>16</sup> Hooghe and Marks (2003) suggest two basic types of MLG. Type 1 MLG conceptualizes jurisdictions on multiple levels as a set of nested levels that do not intersect. In type 2 MLG, fragmented task-specific jurisdictions operate on different levels and they come and go as demands for governance change (Hooghe and Marks 2003, 236). Type 2 MLG is more suitable for analyzing the MLG setting in my research context because multiple governmental levels and private interest intersect in the policy-making of locational policies.

mode of policy making that involves complex interactions among multiple levels of government and social forces” (Horak 2012, 339).

By combining Kübler and Pagano (2012) with Horak and Young (2012), I propose three analytical dimensions that structure the MLG setting in SCCs. The dimensions are labelled public-vertical, public-horizontal and local governance (see Table 6). The international dimension is dismissed because I apply MLG as the political-institutional setting in which local governments formulate their locational policies. Activities on the international level are rather outward-orientated locational policies than constraining or enabling elements that influence the formulation of locational policies.

Table 6: Dimensions of multilevel governance

Kübler and Pagano (2012)	Horak and Young (2012)	MLG-dimensions applied in this thesis
Vertical	Vertical	Public-vertical
Horizontal	-	Public-horizontal
International	-	<i>Dismissed</i>
-	Governance	Local governance

Martin Horak (2012, 349) stresses that the formulation and implementation of urban policies incorporates a wide array of actors. Different layers of governments may be involved in creating innovation and economic development. Thus, economic development and locational policies’ formulation operate on different spatial scales rather than on a fixed spatial scale (Swyngedouw 1997; Bradford and Wolfe 2013). The distribution of jurisdictional authority does not solely determine which actors are involved. Control over resources plays an equal if not more important role. Especially, “control over financial resources allows agents to insert themselves into (or even dominate) policy processes over which they have no formal jurisdiction” (Horak 2012, 349).

Based on these observations, I theorize local governments as the central actors in the formulation of locational policies. However, all three dimensions of MLG feature particular sets of actors that have an interests in engaging in locational policies formulation. In the public-vertical dimension, actors such as national government organizations with a formal mandate for financing and carrying out services of national importance (e.g. policing, monuments, parks) occupy a strong role in local politics.

The public-horizontal dimension incorporates municipalities that are part of the functional economic region. These municipalities should have, at least theoretically, an interest in pushing

forward the economic competitiveness of the whole region. On the local-governance dimension, I incorporate important businesses, universities, private sectors organizations, and similar actors that show an interest in locational politics and locational policies. All actors on the three MLG-dimensions may cooperate, abstain from cooperation or trying to hinder the formulation of locational policies, i.e. they are either enabling or constraining the formulation of specific locational policies. In the following sections, I discuss the three dimensions of the MLG setting in greater detail.

### 3.5.1. Public-vertical dimension

In the urban politics literature, the vertical dimension is typically assessed with the concept of local autonomy (e.g. Gurr and King 1987; Page and Goldsmith 1987; Sellers and Lidström 2007). Thereby it is assumed that local governments operate within a MLG setting that can be more or less constrained by higher-tier governments. Straightforwardly, the less constrained local governments are, the more autonomy local governments have in practice (Goldsmith 1995). “Hence, a very prominent approach to conceptualize the vertical nesting of urban politics and policy has consisted in account for the nature and the extent of the limits impose on cities by higher –level governments” (Kübler and Pagano 2012, 116). Page and Goldsmith (Page and Goldsmith 1987, 5–7) suggest a fourfold classification of local autonomy for comparative studies. First, there is discretion in the constitutional position and legal status of municipalities. Second, municipalities have to perform different kinds and ranges of services and functions. Third, the autonomy differs in the amount of discretion local governments possess in determining how they want to perform these service and functions. This discretion may vary because some functions are mandatory while others are permissive, or because of the amount of administrative oversight exercised by higher governmental levels. Fourth, local governments differ regarding their degree of financial and fiscal autonomy. Crucial for this thesis is the fourth dimension of local autonomy, i.e. the local tax autonomy as well as capital city specific local autonomy constraints that are not covered by the classification of Page and Goldsmith (1987).

Mike Goldsmith (1995, 236; 2012, 137) highlights the importance of the financial regime under which local governments operates. According to Goldsmith, the important variables are the discretion in raising independent tax revenues of local governments and the degree of public transfers that compensate local tax autonomy constraints. By drawing on Goldsmith (1995; 2012), I distinguish between two main national tax regimes: On the one hand, local governments are allowed to collect corporate and personal income taxes as well as property taxes which stands for

high local tax autonomy. On the other hand, low local tax autonomy stands for national tax regimes that allow local governments to collect taxes only on property and land.

The local tax autonomy of capital cities may be further restricted based on their capital city status. For example, capital cities are not allowed to levy taxes on land and buildings belonging to the national government as well as on land and buildings belonging to foreign governments (such as embassies or consulates). Other restrictions may ensue from the specific legal status of a capital city. Washington, D.C. as the US federal district, for example, does not enjoy the same tax rights as US states regarding taxing commuters that work in the district but reside outside the district. Thus, the legal status and the local tax autonomy of a capital city are sometimes intertwined.

Capital city specific constraints have been studied since the beginning of comparative capital city research. Rowat (1968; 1973) compared the governing arrangements and legal statuses of seventeen federal capitals. He distinguished between three types governing structures of capital cities: (1) a capital city that is located in a special district, (2) a capital city as a city-state that is simultaneously a constitutive unit of their nation, and (3) a capital city that is located within a province, state or canton with no special status (see also Harris 1995; Slack and Chattopadhyay 2009). Each of these governing types attach more or less autonomy to a local government in a capital city (Zimmermann 2010).

Important for my thesis is how the local autonomy constrains or enables certain manifestations of locational policies. I expect that the local tax autonomy of capital cities influences the manifestations of business prerequisite policies, SCCs efforts to tap into public funds as well as their regional coordination efforts. Additionally, I expect that capital city specific constraints explains the claims for compensation payments. The effects of local tax autonomy on regional coordination only appears together with the public-horizontal MLG dimension and thus will be discussed in the next subchapter.

- Local tax autonomy constrains or enables certain types of business prerequisites. If local governments enjoy far reaching tax rights, I expect that they will take full advantages of their privileges such as lowering tax rates or awarding tax incentives for specific groups. Local governments may also engage in tax competition with other local jurisdictions what may dominate whole locational policies agendas (Kaufmann and Arnold 2017). In such a context, other business prerequisites, such as the provision of land and real estate are at hand as well, but the focus is likely to rest on taxes. In that sense, I expect, on the one hand, that high local tax autonomy enables local governments to focus on income taxes that trump all other possible manifestation of the business prerequisites category. On the other

hand, if a local government has low tax autonomy, the focus on taxes is constrained, but the focus on the provision of land and real estate is enabled. In such a context, local governments try to increase the availability and value of land and real estate because property taxes constitute the most important independently-raised tax revenue.

- Local autonomy of capital cities (both regarding capital city specific constraints as well as local tax autonomy) constrains or enables strategies to ask for public funds and compensation payments. On the one hand, if SCCs face many capital city specific constraints, strategies to ask for compensation payments are enabled. Capital cities can highlight their specific role as the capital city and point to their low local autonomy ensuing from the capital city status. Few capital city specific constraints make it unlikely that SCCs ask for compensation payments. On the other hand, low local tax autonomy enables to formulate strategies that aim at attracting public funds. The restricted local taxation rights have to be compensated by public funds to sustain the budgets of local governments. Thus, in low local tax autonomy settings asking for public funds is enabled, whereas in high local autonomy settings asking for public funds is constrained.

### 3.5.2. Public-horizontal dimension

The public-horizontal dimension tackles the relationship between the local governments of capital cities and the local governments of neighboring municipalities within the same functional urban area (FUA). The institutional landscape of a FUA is often characterized by a high degree of institutional fragmentation (Hoffmann-Martinot and Sellers 2005). Whereas in most cases, the capital city is the center of the FUA, polycentric FUAs exist as well. A good example of polycentricity is the Randstad region in The Netherlands, in which The Hague is one out of four major urban centers (Amsterdam, Rotterdam, The Hague, and Utrecht).

Institutional fragmentation measures the quantity of governments that are located in a FUA and is thereby capturing the mismatch between the FUA and those jurisdictional boundaries. I distinguish between horizontal and vertical dimensions of institutional fragmentation. The horizontal dimension captures the quantity of local governments that are present in a FUA. In contrast, the vertical dimension measures whether sub-national boundaries (canton, province or state boundaries) cut through the FUA (Kaufmann and Sager 2018).

Institutional fragmentation matters to explain regional coordination of locational policies. Tosics (2007, 791) conducted a large survey of city-regionalism in Europe and concludes that the boundaries of administrative areas constitute very strong barriers against policies that aim at

optimizing the position of the whole metropolitan region. Also Morgan (2014) highlights in a comparative study that municipal boundaries constitute the major barriers to inter-communal collaboration. “More than superficial lines on a map, municipal boundaries demarcate turf and power within a political space and as such they need to be negotiated away politically not conjured away theoretically”(Morgan 2014, 312).

Especially vertical institutional fragmentation seems to be a bigger issue for FUAs that host a SCCs than in other types of FUAs because SCCs often lie in federal districts or in city-states which are both rather small in comparison to the other second-tier entities (cantons, provinces or states) (Slack and Chattopadhyay 2009). This increases the likelihood that these FUAs span over multiple second-tier jurisdictions. Furthermore, federal states are prone to locate their capitals between different regions within a country (Gottmann 1983; Slack and Chattopadhyay 2009) what increases the likelihood of vertical institutional fragmentation. In the cases of bilingual Canada and multilingual Switzerland, their capital cities have been deliberately located near the linguistic frontier which mostly maps second-tier borders. Based on these considerations, I expect that the public-horizontal MLG dimensions influences regional coordination only in combination with tax autonomy.

- Regional coordination is likely to be constrained in a setting of both high horizontal institutional fragmentation and high vertical institutional fragmentation. I expect that horizontal institutional fragmentation increases the transaction costs of coordination whereas vertical institutional fragmentation aggravates coordination because the different local governments are part of different lines of authority. Regional coordination becomes even harder to accomplish if local and second-tier governments enjoy high tax autonomy because this may provide incentives for tax competition between jurisdictions. Thus, I expect, on the one hand, that regional coordination is constrained by the context of a high institutional fragmentation in a FUA and by a high degree of tax autonomy. On the other hand, I expect to find positive coordination in the context of a low institutional fragmentation in a FUA and low tax autonomy. If the two explanatory factors cause contradictory effects on coordination, I expect that I find negative coordination. Given the complexity of these expectation, Table 7 sums up the outlined regional coordination expectation.

Table 7: Regional coordination expectations

Institutional fragmentation	Local tax autonomy	Regional coordination	Expectation
High	High	Regional tax competition/beggar-my-neighbor	High institutional fragmentation and high local tax autonomy constrain regional coordination.
	Low	Negative coordination	High institutional fragmentation constrains and low local tax autonomy enables regional coordination what leads to negative coordination.
Low	High	Negative coordination	Low institutional fragmentation enables and high local tax autonomy constrains regional coordination what leads to negative coordination.
	Low	Positive coordination	Low institutional fragmentation and low local tax autonomy enable regional coordination.

3.5.3. Local governance dimension

The local governance dimension addresses the interplay between local public and local private actors in urban governing arrangements which is a key aspect of the urban politics literature. The analysis of such local power structures characterizes the influential community power debate. Both seminal studies – Floyd Hunter’s (1953) reputational analysis of Atlanta and Robert Dahl’s (1961) study of New Haven – suggest that local business actors substantially influence local politics.<sup>17</sup> Twenty to thirty years later, the growth machine theory and the urban regime theory – both theorizing local political economies – pushed the urban politics literature forward. The growth machine theory (Molotch 1976; Logan and Molotch 1987) emphasizes the power of land and property owners that are constantly striving to increase the value of their property. Land and property owners ally with other local actors that are united under the interests of economic growth such as investment firms, developers, construction firms, local utility companies, local media, small and self-employed businesses but also universities or cultural institutions (Harding 1995, 42). The growth machine theory especially criticizes that economic growth trumps redistributive policies and that the exchange-value of property trumps over the use-value of property and land.

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<sup>17</sup> Floyd (1953) proposed an elitism theory by highlighting the dominance of senior business leaders over local public leaders in Atlanta. Dahl (1961) offered a pluralistic picture of local politics in New Haven by concluding that local decision-making power is in the hand of various organized business groups. This plurality of private elites forms flexible alliances depending on the issue at stake.

The urban regime approach has been established by Clarence Stone (1989) and has emerged as one of the most prevalent frameworks for the analysis of decision-making processes in cities (Mossberger 2009, 40; Pierre 2014). Clarence Stone (Stone 1989; Stone 1993) emphasizes the importance of informal arrangements in which public and private actors function together in order to have the ‘capacity to govern’ a city. In a nutshell, popular control (votes) and investments in local development projects (money) are the two decisive factors that constitute the ‘capacity to govern’ in an urban arena. This ‘capacity to govern’ is the foundation of Stone’s ‘social-production model’ which suggests a diffuse form of political power: the facilitative ‘power to’ rather than the absolutist ‘power over’ (Stone 1993, 229). The ‘social production model’ emphasizes that decision-making regarding local economic development is not following the formal line of authority but does include a wide array of private actors. The incorporation of private actors into local decision-making becomes especially crucial, when we considering that city-officials strive for more than just routine service delivery (Stone 1989, 219).

Pierre (2014) stresses that a strict application of the classic urban regime theory is anachronistic in times of post-industrial globalization: “Urban regime theory does not consider or conceptualize several of the societal transformation of the 1990s and early 2000s like continuing globalization, the emergence of a postindustrial city with economic growth tied to the service sector; the internationalization, vertical integration (...)” (Pierre 2014, 13). This objection is relevant for SCCs since capital cities feature a specific political economy based on knowledge-intensive services between government actors and KIBS-firms (Mayer et al. 2016). Given the emergence of the urban regime theory through inductive theory-building, it is straightforward that the theory fails to incorporate economic, politic and societal transformation. What has started as a case study of Atlanta has been developed into a set of deterministic urban regime types that tend to be ethnocentric and became anachronistic (Pierre 2005; Pierre 2014). As a consequence, the urban regime concept travels poorly and is in its totality not usable for comparison (Pierre 2005; Morgan 2014, 303).

In an in-person interview with Clarence Stone, he stresses that the broader context of economic development has changed. The urgency of big development projects – like expressways or a business city center which he described in his book about Atlanta (Stone 1989) – has eased away. Corporations are not as place-bound anymore and especially their leaders have a more globalized ken. A diverse range of non-governmental actors such as universities and knowledge generating organizations became important for local economic development. As a consequence, locally embedded business actors lost their prime role. Clarence Stone assesses regime politics slightly different now: Informal governing arrangements between public and private local actors are much

more fragmented, looser and ad-hoc nowadays. Given Pierre's (2014) objections and Stone's (Interview C. Stone) adjustments, I am not applying the classic urban regimes types as an analytical model. Instead, I am drawing on the still relevant 'social-production model' and its 'power to' in order to analyze how non-governmental influence is enabling or constraining certain types of locational policies.

The 'social-production model' is still relevant. Business actors are not just concerned about specific local economic development projects but are strategic actors who want to influence the general locational policies agenda (Swyngedouw, Moulaert, and Rodriguez 2002). Horak and Young (2012) found in an analysis of governing arrangements in big Canadian cities that resources (money, information and expertise) often trump formal decision-making authority. As non-governmental actors possess more flexible or different resources compared to local governments, non-governmental actors can utilize their resources strategically. In line with the urban politics tradition, Horak (2012, 349) conclude that actors possessing resources are able to influence policies in a direction that reflects their own particular preferences, rather than the preferences of the broader public.

I will compare and examine local governance regimes in SCCs in a separate subchapter in the discussion (see subchapter 9.2.2) to do justice to research question number four. However, I do not formulate an expectation that would incorporate local governance regimes as the phenomenon to be explained.

I draw on all three dimensions of the MLG setting to formulate another expectation regarding the locational policy coordination that is based on the 'structuring' causal mechanism.

- Coordination is an inward-orientated and political locational policy. I expect that coordination can directly aim at constraints ensuing from the MLG setting. Coordination may pursue to initiate and stimulate interactions of crucial actors in all three MLG dimensions. Coordination does not have the power to modify or transform MLG structures but I expect that coordination may aim at overcoming or easing the constraints ensuing from the MLG structures. For example, coordination may aim at improving the cooperation between actors on multiple governmental levels that have an interest in the economic development of capital cities. Alternatively, coordination may improve coherent locational policy-making between jurisdictions in the FUA. For example, Chen, Feiock and Hsieh (2015) find that regional economic development partnerships serve as an effective tool to govern fragmented and densely populated FUAs. Lastly, coordination may also aim

at improving the interaction between local governments with crucial local non-governmental actors within the local governance regime.

### 3.5.4. Expectations

The expectations based on the three dimensions of the MLG setting have been discussed at the end of each subchapter. Table 8 summarizes these formulated expectations.

Table 8: Expectations based on MLG settings

<b>MLG dimension</b>	<b>Phenomenon to be explained</b>	<b>Causal mechanism</b>	<b>Expectation</b>
Public-vertical dimension - local tax autonomy	Business prerequisites	Enabling/ constraining	High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category. Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.
Public-horizontal - institutional fragmentation Public-vertical - local tax autonomy	Regional coordination	Enabling/ constraining	High institutional fragmentation and high local tax autonomy constrain regional coordination. Low institutional fragmentation and low local tax autonomy enable regional coordination.
All dimensions	Coordination	Structuring	Coordination aims at overcoming the constraining parts of the MLG setting.
Public-vertical dimension	Public funds and compensation payments	Enabling/ constraining	Low local autonomy enables to ask for public funds and compensation payments. High local autonomy constrains to ask for public funds and compensation payments.

The eight expectations of both explanatory factors, RIS and MLG setting is put together to an analytical framework in the next subchapter. Especially the two different causal mechanisms that underlie the expectations link the expectations to a coherent analytical framework.

### 3.6. Putting it all together

This brief conclusive subchapter summarizes the eight expectations. Furthermore, this subchapter explains how the expectations – together with the underlying causal mechanisms – can be put together to a coherent analytical framework to study the formulation of locational policies in SCCs.

The expectations have been outlined and discussed within the subchapters describing the explanatory factors. Table 9 summarizes the eight expectations that cover all six locational policies categories. The causal mechanism ‘enabling/constraining’ underlies six expectations – one for each locational policies category – and the causal mechanism ‘structuring’ underlies two expectations.

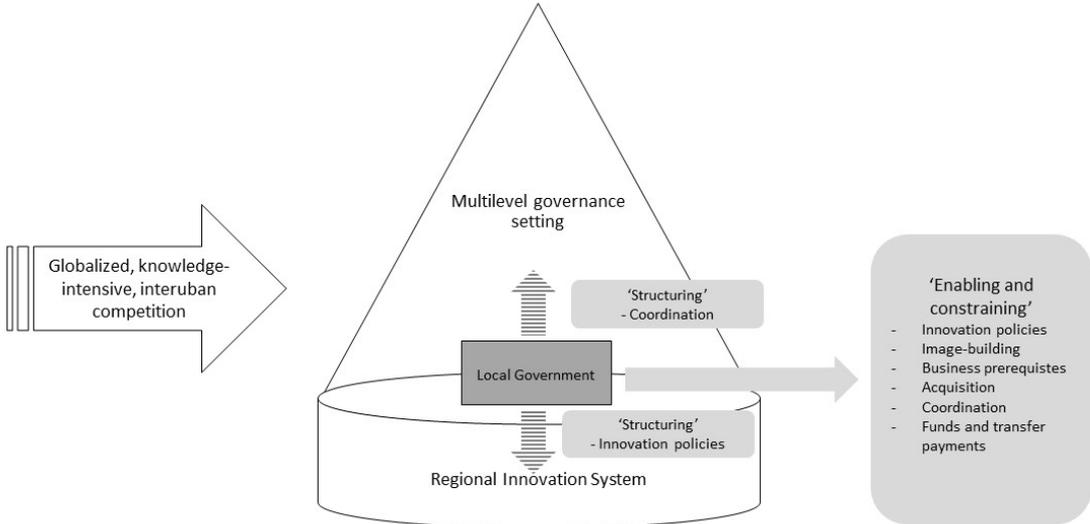


Table 9: Summary of the expectations

Nr.	Explanatory factor	Phenomenon to be explained	Causal mechanism	Expectation
E.1.1	RIS - development stages of RISs	Innovation policies	Enabling/ constraining	A moderately or highly developed RIS enables the formulation of innovation policies. A weakly developed RIS restricts the formulation of innovation policies.
E.1.2	RIS - RIS failures	Innovation policies	Structuring	Innovation policies aim at modifying and transforming the constraining parts of the RIS.
E.2	RIS - development stages of RISs	Image building	Enabling/ constraining	A moderately or highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy. A weakly developed RIS enables the formulation of a capital city image building strategy, but constrains the formulation of a business town image building strategy.
E.3	MLG Public vertical -local tax autonomy	Business prerequisites	Enabling/ constraining	High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category. Low local tax autonomy constrains to focus on income taxes and enables to focus on providing and developing land and real estate.
E.4	RIS -development stages of RISs	Acquisition	Enabling/ constraining	A moderately or highly developed RIS enables the adaption of a profound and large-scale acquisition strategy. A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy.
E.5.1	MLG Public-horizontal - institutional fragmentation Public-vertical - local tax autonomy	Regional coordination	Enabling/ constraining	High institutional fragmentation and high local tax autonomy constrain regional coordination. Low institutional fragmentation and low local tax autonomy enable regional coordination.
E.5.2	MLG All three MLG dimensions	Coordination	Structuring	Coordination aims at overcoming the constraining parts of the MLG setting.
E.6	MLG Public-vertical	Public funds and compensation payments	Enabling/ constraining	Low local autonomy enables to ask for public funds and compensation payments. High local autonomy constrains to ask for public funds and compensation payments.

The underlying causal mechanisms ‘enabling/constraining’ and ‘structuring’ guarantee for a dynamic framework of locational policies formulation in SCCs. Figure 1 highlights the interplay between the two explanatory factors, the two causal mechanisms and locational policies as the phenomena to be explained.

Figure 1: Dynamic analytical framework,



Source: Own illustration

As illustrated in Figure 1, I assume that all SCCs have to deal with similar pressures ensuing from the globalized, knowledge-intensive interurban competition. SCCs formulate locational policies to strengthen their competitiveness in this globalized interurban competition. However, the RIS as a description of the economic structure and the MLG setting as description of the political-institutional setting moderate these pressures and thus account for place-based responses to these globalized pressures. These local settings, i.e. the RIS and the MLG setting, constrain or enable the formulation of specific types of locational policies. But local governments may also target their own local settings by formulating ‘structuring’ policies to create more favorable local settings what can be regarded as a kind of agency. Furthermore, the illustration of the dynamics behind the analytical framework shows that local governments have different locational policy options at hand and may apply them strategically. Thus, SCCs “need not be leaves in the wind” (Savitch and Kantor 2002, 346) as they have a variety of locational policies at hand to prepare themselves for this globalized interurban competition.

The presented analytical framework is a fruitful contribution to the literature of urban policy-making. The analytical framework incorporates several aspects that the debate by Ward et al. (2011)

outlined as productive and relevant for contemporary urban studies: The interdisciplinary research characteristic, the incorporation of a variety of actors into the analysis, the comparative case-study design and the simultaneity of structure and agency. I furthermore profit from a self-developed framework of locational policies that is interdisciplinarily enriched by theories of political science, urban studies and economic geography and thereby brings some order into the so far fuzzy concept of locational policies.

## 4. Research Design

This thesis is based on a multiple case study design that includes four SCCs in Western countries, namely Bern, Ottawa, The Hague, and Washington D.C.. The case selection from the population follows a ‘most similar systems’-design logic (Przeworski and Teune 1970). The backbone of this thesis consists of interviews with relevant decision makers and experts in all four SCCs. The research strategy follows qualitative research standards (George and Bennett 2005; Blatter and Haverland 2012). The research design combines a cross-case analysis with a within-case analysis of causal mechanisms that have been deduced from theory. In that sense, I combine two inferential strategies what increases the reliability of the inferences (Brady and Collier 2010).

### 4.1. Case selection

In distinction to in-depth, idiographic case studies, a comparative urban research agenda entails by necessity some degree of reductionism as empirical observations are prepared for comparative assessments (Pierre 2005, 447). Cases were selected from the population following a ‘most similar systems’-design logic (Przeworski and Teune 1970) that is based on Mill’s method of difference (Mill 1872). The method of difference compares cases that are different in the phenomena to be explained and the proposed explanatory factors but are in agreement with many potential additional explanatory factors (Seawright and Colier 2010, 337–38). Thus, a theoretical sampling should ensure the maximization of the variance of the explanatory factors while minimizing the variance of the control factors (Lijphart 1975, 165). I restrict myself to SCCs from OECD countries. This allows me to control for important economic and political contextual factors while still allowing for variance in the proposed explanatory factors.

I have theoretically derived the RIS and the MLG setting as the crucial factors for explaining the formulation of locational policies in SCCs. Given the logic of the ‘most similar systems’-design, the selected cases have to vary in the two explanatory factors. As I will outline, the four selected cases vary considerably on the RIS and the MLG dimensions.

Ten SCCs exist in the 34 OECD countries.<sup>18</sup> Out of the nine SCCs in OECD countries, I chose Bern, Ottawa, The Hague, and Washington D.C.. These SCCs are four prime examples of economically inferior capital cities (see Table 1). Berlin, Jerusalem and Rome were excluded due to their symbolic weight for the nation. These three cities fit well the economic definition of SCCs

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<sup>18</sup> These are Canberra in Australia; Ottawa in Canada; Berlin in Germany; Jerusalem in Israel; Rome in Italy; The Hague in The Netherlands; Wellington in New Zealand; Bern in Switzerland; Ankara in Turkey; and Washington D.C. in United States.

but they are the primary historical, symbolical and cultural cities of their country. Likewise, Ankara was excluded because of its rather exceptional political, cultural and religious setting what complicates controlling for potential interfering factors. Canberra and Wellington, although fitting well the category of SCCs, were primarily excluded for practical reasons given the considerable resources necessary to conduct field research there. The selection of Bern, Ottawa, The Hague, and Washington D.C. allows to compare two European SCCs with two North-American SCCs.

The four cases differ in the explanatory factor RIS. Table 10 summarizes the observed RIS stages in the selected four SCCs. The four different RISs are described in-depth in the relevant case studies. In Bern, I do not find a thick set up of crucial RIS actors. Especially intermediary organizations are rare. As a consequence, the RIS in Bern is fragmented. In Ottawa, the RIS is well set-up and the sectors are diversified. Besides the federal sector there is high-tech sector that stems from the early telecom industries as well as a growing digital high-tech sector. However, the different sectors and the different business communities in the region are only loosely connected and thus fragmented. The RIS in The Hague is starting to build up organizational thickness as it is establishing research organization to supplement its existing clusters. The knowledge interactions are specifically intense in the (cyber) security cluster and in the international organizations cluster, but the other clusters are rather fragmented. The RIS in Washington, D.C. features no RIS failure expect of lock-in. Both RIS subsystems are organizationally thick and many intermediary organizations stimulate cooperative and joint activities between KIBS firms, knowledge organizations and federal agencies. Especially the (cyber) security and health clusters display intense knowledge dynamics and abilities to diversify.

Table 10: RIS developments in the four SCCs

<b>RIS failures</b>	<b>Bern</b>	<b>Ottawa</b>	<b>The Hague</b>	<b>Washington, D.C.</b>
Organizational thinness	Yes	No	(Yes)	No
Fragmentation	Yes	Yes	(Yes)	No
Lock-in	Yes	Yes	Yes	Yes
<b>RIS stage</b>	<b>Weakly developed</b>	<b>Moderately developed</b>	<b>Moderately developed</b>	<b>Highly developed</b>

The four cases also display varying configuration in the explanatory factor MLG setting. Table 11 summarizes the observed MLG setting in all four SCCs. The four different MLG settings are described in-depth in the relevant case studies.

Table 11: MLG settings in the four SCCs

MLG dimensions	Ottawa	Washington, D.C.	Bern	The Hague
Public vertical - capital city specific constraints - local tax autonomy	Constraining  Rather weak  Rather low	Rather constraining  Weak  High	Enabling  Rather high  High	Mixed influence  High  Low
Public horizontal - Institutional fragmentation	Constraining  High	Constraining  High	Enabling  Low	Enabling  Low
Local governance -local governance regime	Enabling  - Development-oriented	Enabling  - Development-oriented	Constraining  - Public sector dominated	Enabling  - Corporatist
<b>Total</b>	<b>Constraining</b>	<b>More constraining than enabling</b>	<b>More enabling than constraining</b>	<b>Enabling</b>

Bern is treated like any other Swiss municipality and is thus not constrained due to its capital city status. Yet, the strong role of the canton constraints the City of Bern in its ability to formulate locational policies. Bern enjoys furthermore a high local tax autonomy as around 15% of all tax revenue in Switzerland is raised at the local level (OECD 2014a). Swiss municipalities are allowed to collect personal and corporate income taxes as well as property taxes. Regarding the public vertical dimension, the FUA Bern consists of 38 municipalities. Three municipalities that are located at the very margin of the FUA belong to a neighboring canton (Swiss Federal Statistical Office 2015b).<sup>19</sup> Public actors dominate the local governance regime without much access opportunities for the business community what constrains the formulation of locational policies.

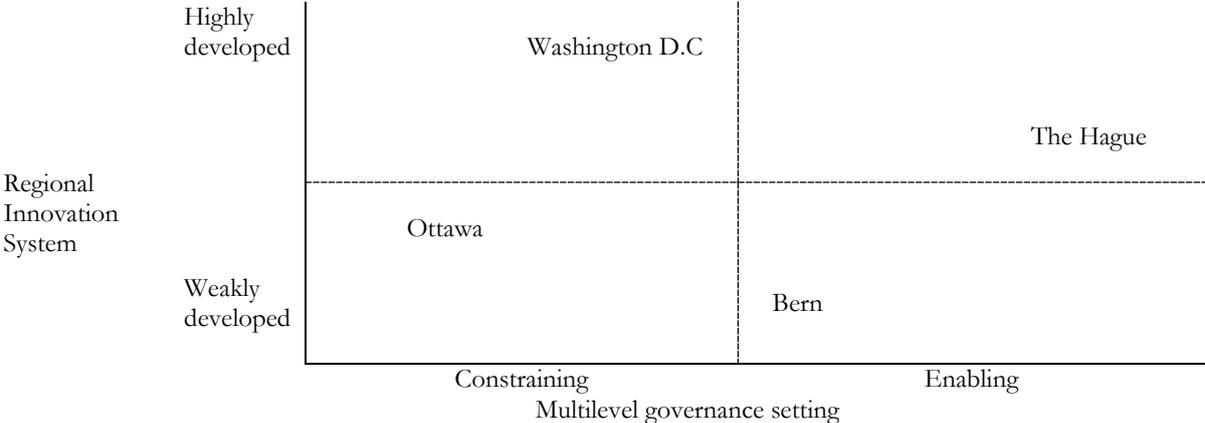
Ottawa is constrained by its capital city status because the federal government is able to pursue its interest via the federal land use agency. The local tax autonomy of Ottawa is rather low as around 9% of all tax revenue is collected at the local level (OECD 2014a). Canadian municipalities are only allowed to levy property taxes. The FUA Ottawa-Gatineau features 63 local governments (OECD 2014b). This FUA is vertically institutional fragmented at its very core between the provinces Ontario and Quebec. The local governance regime in Ottawa is development-oriented. The city hall facilitates interaction between public and private actors what enables the formulation of locational policies in Ottawa.

<sup>19</sup> The OECD only incorporates FUAs in its Metropolitan Database (2014b) if they hosts a population of 500'000 or more. Hence, the FUA Bern is incorporated in the OECD Metropolitan Database. Thus, I rely on 2000 agglomeration definition and the data of the Swiss Federal Statistical Office for the case of Bern.

The Hague is treated like any other Dutch municipality and thus does not face constraints ensuing from its capital city status. The local tax autonomy of The Hague is low as around 3% of all tax revenue is collected at the local level (2014a). Dutch municipalities are only allowed to levy property taxes. The FUA The Hague is neither horizontally nor vertically institutionally fragmented. All 11 local governments in the FUA The Hague belong to the province South Holland (OECD 2014b). The local governance regime in The Hague can be described as corporatist what enables the formulation of locational policies in The Hague.

Washington, D.C. faces multiple capital city specific local autonomy constraints due to its specific constitutional status as the federal district. The local tax autonomy is generally high in the US as around 15% of all tax revenue is raised at the local level (OECD 2014a). US municipalities are allowed to collect personal and corporate income taxes as well as property taxes. However, DC’s local tax autonomy is severely constrained due to its special role as the federal district. The FUA is vertically and horizontally institutional fragmented as it consists of 91 local governments. It spans over three states (Maryland, Virginia, and at the very Southwest margin West Virginia) plus the District of Columbia (OECD 2014b). The local governance regime in Washington, D.C. is development-oriented. Business elites are well organized with informal access to public actors what enables the formulation of locational policies.

Figure 2: Theoretically sampled case selection



Note: Distances only serve illustrative purposes and do not imply observed values

Figure 2 shows illustratively that the four cases fit the requirements of the ‘most-similar systems’ design given the observed characteristics of the two explanatory factors. Table 12 summarizes the four cases and accounts for controlled explanatory factors, partly incorporated potential explanatory factors and potential additional explanatory factors. The economic strength of a SCC and the type of national economy are partly captured by the RIS concept, whereas the state form

as a political-institutional factor is partly covered by the MLG setting. The continent as a potential interfering factor is partly captured by both the RIS and the MLG as I assume that continental specificities can both be found in the RIS and the MLG setting of a locality. I consider the remaining potentially explanatory factors, i.e. inhabitants and country size, as not very relevant for explaining the formulation of locational policies. However, when discussing the results, I keep these variables in mind as potential interfering factors.

Table 12: Summary of all four cases

Type of factor	Factor	Bern	Ottawa	The Hague	Washington D.C.
Explanatory factor	Regional Innovation System	Early stage	Advanced stage	Advanced stage	Mature stage
Explanatory factor	Multilevel government setting	More enabling than constraining	Constraining	Enabling	Mixed influence
<b>Phenomena to be explained</b>	Locational policies	?	?	?	?
Controlled potential explanatory factor	Type of capital city	Secondary capital city	Secondary capital city	Secondary capital city	Secondary capital city
Controlled potential explanatory factor	Type of country	Western OECD country	Western OECD country	Western OECD country	Western OECD country
Partly incorporated potential explanatory factor	Economic strength - GDP metro area	35'350	56'323	39'517	442'758
Partly incorporated potential explanatory factor	Type of national economy	Coordinated market economy	Liberal market economy	Coordinated market economy	Liberal market economy
Partly incorporated potential explanatory factor	State form	Federal state	Federal state	Decentralized unitary state	Federal state
Partly incorporated potential explanatory factor	Continent	Europe	North-America	Europe	North-America
Potential additional explanatory factor	Inhabitants - City - FUA - Country	130'015 365'238 8'237'666	957'148 1'477'881 35'851'774	514'861 838'015 16'900'726	672'228 6'097'684 321'418'820
Potential additional explanatory factor	Country size	Small	Large	Small	Large

Sources: GDP: OECD Metropolitan Areas for Ottawa, The Hague and Washington, D.C.. Data from 2012 in million US\$. OECD Regional database TL3 regions for Bern. The TL3 region is equal to the Canton of Bern. Data from 2011 in million US\$. Type of national economy: Hall and Soskice (2001). Inhabitants: see sources in the individual case studies.

Note: Table inspired by Blatter and Haverland (2012)

## 4.2. Data

The backbone of this thesis consists of 91 semi-structured, in-person interviews with 103 relevant decision makers and experts in the four SCCs. The selection of interview partners is comparable

in all cases as they occupy four broad roles: (1) public officials that serve on various governmental levels, (2) local and regional economic development agents, (3) business leaders and private interest groups representatives, (4) as well as experts and academics. Among those interviewed are some high-profile actors such as the mayor of Bern, the state advocate of the Netherlands in The Hague (*Landsadvocaat*), the executive director of the Metropolitan Washington Council of Governments, and the CEO of Invest Ottawa.

Around 80% of the interviews lasted between 40 and 60 minutes.<sup>20</sup> The interviews have been realized during nine months of field study in Ottawa, The Hague and Washington D.C. as well as during the time at my home university in Bern.<sup>21</sup> I was embedded in local academic institutions during these field studies and took full advantage of the existing contacts and networks to get access to interview partners, data and documents. The interview partners were carefully selected to ensure sufficient variety within the cases and consistency between the cases. I discussed the selection of interview partners and preliminary findings with my local peers. In order to increase the reliability of my research, I presented my research framework and preliminary findings in all three academic partner institutions.<sup>22</sup> Table 13 summarizes the types of interview partners. The interview partners are listed in the appendix in Table 56.

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<sup>20</sup> Around 40% of the interviews have been conducted together with my research colleague Martin Warland from economic geography.

<sup>21</sup> I had the privilege to be a guest researcher at Leiden University, Campus The Hague from September to November 2014, at Virginia Tech, National Capital Region from December 2014 to February 2015, and at Ottawa University, Center on Governance from March to May 2015.

<sup>22</sup> In November 2014, I presented at a brown bag lunch at Leiden University, Campus The Hague. In January 2015, I presented at a faculty meeting at Virginia Tech, Campus Alexandria. In May 2015, I presented at the Governance Innovation Lecture Series at University of Ottawa.

Table 13: Summary of interviews

Type of interviewees	Bern	Ottawa	The Hague	Washington, D.C.	Total
- Public Officials (local, sub-national, and national government)	6	5	9	8	28
- Economic development agents - Regional coordination agents	3	6	4	4	17
- Business actors - Private interest group representatives	7	6	5	8	26
- Experts - Academics	3	4	6	7	20
<b>Total</b>	<b>19</b>	<b>21</b>	<b>24</b>	<b>27</b>	<b>91</b>

I have chosen to rely on elite interviews out of methodological reasons. Interviewing allowed me to ask specific questions about the process (how?) and the causal mechanism (why?) in the formulation of locational policies. Without interviewing decision makers, the policy formulation process would remain a black box and I could only rely on locational policies that are stated on paper. It is the purpose of case studies to peer into the box of causality. In-depth interviews are thereby one technique to detect causality (Gerring 2007, 45). This is in line with Rathbun (2008, 690) who highlights that interviewing is often best suited to tackle agency that is often not written down on paper. Interviewing decision makers is especially favorable when few select decision makers are involved what creates bottle-necks of political power that is hard to shed light on otherwise.

I was very concerned to triangulate data during the entire data collection process. As suggested by Berry (2002, 680) and Rathbun (2008, 695), I exhausted all secondary sources and publicly available primary sources before starting to conduct the interviews. The specific locational policies have been mostly obtained from strategic papers and reports, but have as well been inquired in the interviews. Economic and political context information have been accumulated for each SCC on the basis of existing databases, statistical information and the analysis of relevant documents. This ‘frontloading’ of desk research helped me to pose more targeted and effective questions in the interviews. Furthermore, I started the interview process in each locality with a first set of explorative interviews that I conducted with academics and experts. I asked for suggestions of potential other interview partners at the end of all interviews. I took extensive notes during the interview. Immediately after the interview, I wrote down an interview protocol and I traced the

sources which have been mentioned in the interviews. Interview protocols and case study databases for every city accompanied the data collection process. Interviews with experts and academics were helpful to objectify my collected data. I was concerned to especially triangulate between reactive and non-reactive data sources what enhances confidence in the observations (Webb et al. 1999, 2; Kapiszewski, MacLean, and Read 2015, 158). This in-depth analysis of four cases enables data triangulation because multiple sources and data types can be analyzed to measure the same phenomena for a single unit (Blatter and Haverland 2012, 68).

#### 4.3. Analytical strategy

The research strategy applied in this thesis proceeded in six steps: First, the broader historical, political and economic context and the dependent variables (locational policies) have been identified for each SCC based on the collected non-reactive data. Immersing into the cases prior the actual analysis is especially important for unfamiliar cases (George and Bennett 2005, 89). Second, the characteristics/configurations of the explanatory factors were assessed. Third, the manifestations of locational policies in all six categories of locational policies in all four SCCs have been determined by analyzing locational policies agendas on paper. I also asked in the interviews specific questions about formulated locational policies. Fourth, I tested for each expectation in all four SCCs whether the expectations could predict the locational policy and whether evidence for the underlying causal mechanism could be found. Regarding the causal mechanisms, I mostly relied on interview data, because the interviews allowed me to pose specific why-questions about the causality of formulating locational policies that I have outlined in the expectations. Fifth, in the comparative chapter (see chapter 9), I will test the validity of each expectation step by step by comparing and discussing the outcome of expectations in the four SCCs. Sixth, possible generalizations of the findings to the whole population of SCCs in OECD countries as well as to other secondary capital cities are discussed (see subchapter 9.3).

The inferential strategies in this thesis can be summarized as being twofold. First, the inferential strategy in the small-N between-case analysis, concerning research steps number five and six, combines the ‘most similar systems’-design (Przeworski and Teune 1970) that is based on Mill’s method of difference (Mill 1872). When standing alone, this standard small-N comparative approach is a rather weak basis for evaluation causal mechanisms. Thus, I “juxtapose this comparative framing with carefully-executed analysis carried out within the cases” (Collier, Brady, and Seawright 2010, 10). Therefore is the second inferential strategy a within case analysis, concerning research steps number one to four, that analyzes the theoretically derived causal mechanism of every expectation base on interview data.

To sum up, the research design allows to fulfil the four criteria that guarantee the rigor of comparative case study research: internal validity, construct validity, external validity, and reliability (Cook and Campbell 1979; Gibbert, Ruigrok, and Wicki 2008). Internal validity is ensured by a theory-driven research. The expectations and the anticipated underlying causal mechanisms are derived from theory and have been clearly outlined. The incorporation of theories from economic geography, urban studies and political science furthermore lead to an application of different lenses and bodies of literatures. I am doing justice to construct validity by triangulating data from reactive and non-reactive data sources. The tentative conclusions have been reviewed by peers as well as by key informants. External validity is ensured by theoretically sampling the four cases from the population of cases. Finally, the reliability of this comparative case study design is ensured by applying elaborate interview strategies as well as using interview protocols and case study databases.

## 5. Bern

Switzerland does not know the formal status of a capital city. Bern is the federal city meaning that it is the seat of the Swiss government and the Swiss parliament. An important consequence of the federal city status is that it allows federal institution to be located anywhere across the whole country which leads to the polycentric distribution of capital city functions. The Swiss judicial branch is distributed to across different parts of the country. The Federal Criminal Court, for example, is located in Bellinzona, a medium-sized city in the Italian-speaking part of Switzerland, whereas the Swiss Administrative Court is located in German-speaking St. Gallen and the Federal Supreme Court is located in the French-speaking Lausanne. This conscious policy of decentralizing the capital city function was mostly concerned with equal linguistic representation especially of the French-speaking Swiss regions as most federal government institutions and organizations were relocated towards the West (e.g. the Federal Office of Communication to Biel/Bienne, the Federal Statistical Office to Neuchâtel, the Federal Office of Housing to Grenchen, and the Federal Water Office to Biel/Bienne) (Kübler 2009, 244). In sum, the capital city status in Switzerland does not come with opulent benefits and the federal government is rather indifferent towards its capital city (Kaufmann et al. 2016, 120-121).

Table 14 summarizes the case study of Bern. This case study does not support many of the formulated expectations. In general Bernese officials rely on political locational policies, especially on positioning Bern as the political center of Switzerland, as well as on attracting residents. Economic locational policies oriented towards the sluggish economic dynamics of the region are largely missing. This can be explained, on the one hand, by an only weak-developed RIS and on the other hand by the strong role of the Canton of Bern that has discretionary power in a lot of locational policies issues constrains locational policies formulation of the local level.

Table 14: Expectations and findings of the case study Bern

Nr.	Explanatory factor	Phenomenon to be explained	Expectation	Results
E1	RIS - Weakly developed	Innovation policies	A weakly developed RIS restricts the formulation of innovation policies.	Not supported
E1.2	RIS - RIS failure(s): Fragmentation, organizational thinness, lock-in	Innovation policies	Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Partly supported
E2	RIS - Weakly developed	Image building	A weakly developed RIS enables the formulation of a capital city image building strategy, but constrains the formulation of a business town image building strategy.	Supported
E3	MLG setting - high local tax autonomy	Business prerequisites	High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.	Not supported
E4	RIS - Weakly developed	Acquisition	A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy	Not supported
E5.1	MLG setting - low institutional fragmentation - high local tax autonomy	Regional coordination	<i>Agglomeration level:</i> Low institutional fragmentation enables and high local tax autonomy constrains regional coordination what leads to negative coordination. <i>Regional level:</i> High institutional fragmentation and high local tax autonomy constrain regional coordination.	Supported
E5.2	MLG setting - constrained in the local governance dimension	Coordination	Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported
E6	MLG setting - high local tax autonomy  - No capital city specific constraints	Funds and compensation payments	<i>I:</i> High local tax autonomy constrains to ask for public funds. <i>II:</i> No capital city specific constraints constrain to ask for compensation payments.	Partly supported  Supported

The remainder of this case study chapter is structured in four subchapters. The first subchapter gives a general description of Bern as well as discusses the manifestations of the two explanatory factors. The second subchapter addresses the different locational policies categories and tests the respective expectation(s) one step at a time. The third subchapter links the different locational policies to a locational policies agenda and discusses the results in an integrative manner. The last subchapter concludes the case study.

## 5.1. Profile of Bern

### 5.1.1. History

Bern has a long tradition as an influential patrician-governed city-state. At its height (1500-1800), Bern was the largest European city-state north of the Alps, and as such the city was an aristocratic stronghold within the Old Swiss Confederacy and feudally governed its large territories (Gerber 2015). Bern's wealth stemmed from huge land possession and its notorious mercenaries. At that time, no capital city existed, as the political representatives from the different confederated states used to meet in rotating locations. This glorious era of Bern as a city-state ended when in 1798 the French Revolutionary Army occupied Bern. Enforced by Napoleon, the Old Swiss Confederacy was transformed into the Helvetic Republic and as such the Republic required a permanent seat for the government. During these times of political struggles, the seat of government changed between the Swiss cities of Aarau, Lucerne, Bern and Lausanne. Napoleon intervened again in 1803 to calm down the quarrelling Swiss politics and re-established a federalist state and with it a system of six rotating venues for political gatherings namely the cities of Basel, Bern, Fribourg, Lucerne, Solothurn, and Zurich. A new federal treaty in 1815 reduced the number of cities for political gatherings to Bern, Lucerne and Zurich (Stadler 1971; Holenstein 2012).

After the short and relatively bloodless Swiss civil war in 1847, the newly established Swiss Confederation was in search of a permanent capital city. Given the immediate provision of suitable infrastructure, only the three cities Bern, Lucerne and Zurich were an option. Bern was chosen in 1848 for pragmatic reasons since Lucerne as a conservative, catholic stronghold was still skeptical of the new federal state and Zurich was already economically too powerful (Kübler 2009; Stadler 1971). The choice of Bern as a capital city was furthermore an inclusionary gesture because of Bern's central geographic location and in particular because of its proximity to the French speaking parts of Switzerland (Stadler 1971, 582). Zurich was awarded the opportunity to host the new Swiss Federal Institute of Technology in Zurich, which today is an internationally top-ranked university.

In the last 70 years, Bern has steadily lost ground to the nowadays larger and economically more prosperous Swiss cities such as Zurich, Geneva and Basel. As a result, the Swiss urban system tends to develop towards a hierarchical system where three metropolitan poles take off, whereas Bern and other minor urban centers have only regional importance (Kübler, Schenkel, and Leresche 2003, 266). This hierarchy is likely to become more profound as federal policymakers and politicians have in recent years turned their attention towards the role and importance of large

metropolitan regions and have devised strategies to strengthen the position of Zurich, Geneva-Lausanne and Basel (Kaufmann et al. 2016, 127).

5.1.2. Geography and population

Bern and its surrounding agglomeration are significantly smaller in terms of population when compared to Zurich, Geneva and Basel and their agglomerations and metropolitan regions. The Swiss Federal Statistical Office defines the FUA Bern consisting of 38 municipalities.<sup>23</sup>The agglomeration of Bern is located near location near a vast agricultural and mountainous hinterland (e.g. regions like the Emmental or the Bernese Oberland).The City of Bern accounts for 130’000 residents and is the fifth largest city in Switzerland based on population. The agglomeration of Bern is home to 347’000 inhabitants.<sup>24</sup> When taking such a larger, agglomeration-oriented perspective, Bern ranks fourth among urban agglomerations in Switzerland. However, the agglomeration of Bern is third last in respect to population growth out of 56 Swiss agglomerations between 1980 and 2010 (Hermann 2013).<sup>25</sup> Bern is also the capital of the Canton of Bern, which is the largest and territorially most heterogeneous canton in Switzerland.

Table 15: Population of different relevant perimeters

Scale	1981	1990	2000	2010	2014	Change (%) 1981 - 2014
City of Bern (1 municipality)	145’285	134’629	122’484	123’841	130’015	-10.51
Agglomeration Bern (38 municipalities)	339’039	341’404	336’134	347’248	365’238	+7.73
Canton of Bern (356 municipalities)	900’987	930’747	943’696	978’248	1’009’418	+12.03
Switzerland (26 cantons, 2324 municipalities)	6’372’904	6’750’693	7’204’055	7’864’012	8’237’666	+29.26

Source: Swiss Federal Statistical Office (2015a): Municipalities Statistic 1981-2014. The data for the agglomeration of Bern is aggregated based on municipality data referring to the agglomeration definition 2000.

Table 15 summarizes the population dynamics in Bern and relates it to other relevant perimeter. The population of the City of Bern shrank significantly from 145’000 in 1980 to 122’000 in 2006. The population decline can be explained by the tendency of the population – particularly families – to move out of the city to smaller jurisdictions in the suburban surroundings attracted by proactive development policies of suburban and rural communities. To some extent Bern has shown

<sup>23</sup> The FUA Bern is not considered a metropolitan region by terms of the OECD as it features less than 500’000 inhabitants (OECD 2014b).

<sup>24</sup> This numbers refer to the agglomeration definition 2000 by the Swiss Statistical office. Since 2012 exists an alternative agglomeration definition based on morphological and functional criteria. The alternative agglomerations definition 2012 for Bern incorporates 75 municipalities home to 398’873 residents in 2012.

<sup>25</sup> The data by Hermann (2013) are calculated using the agglomeration definition 2000 by the Swiss Statistical Office.

the same declining population trends as all the big Swiss cities since the 1950s which was further accentuated by the establishment of public transport systems in the 1980s. Until the end of the 1990s, many of Switzerland's residents chose to live in municipalities in suburban agglomerations instead of the urban centers (Kübler 2006). However, this trend was more drastic and longer lasting in the case of Bern (Kaufmann et al. 2016, 122). Recent data about the population dynamics in Bern show a turnaround and illustrate that the city is also benefitting from a trend towards re-urbanization: As of 2014, around 130'000 people are living in the City of Bern and this population number is likely to grow in the future.

### 5.1.3. Regional Innovation System

The RIS in Bern is only weakly developed because it features all three RIS failures. It displays organizational thinness and lacks the commitment of actors to stimulate the interaction both within and between the RIS subsystems. The RIS is also public sector dependent as the clusters are closely linked to the capital city function without much diversification activities.

#### Knowledge application and exploitation subsystem

The economy of the City of Bern accounts for 142'000 full-time equivalent jobs (City of Bern 2015).<sup>26</sup> Quite impressively, Bern features 10'000 more full-time jobs than total inhabitants. Neighboring cities such as Köniz, for example, have significantly lower job-housing balances as, in the case of Köniz, they count more residents than jobs (40'000 residents to 20'000 jobs). As a consequence, on each workday the population of Bern grows by a total of 85'000 people (+68% people in the city) (City of Bern 2013).

The City of Bern has never developed a significant manufacturing base, the tertiary sector accounts for a total employment of 90%, the secondary sector 9.8% and the primary sector 0.2% (Swiss Federal Statistical Office 2015c). However, the share of people that are employed in the service sector declines rapidly with distance to Bern (Kaufmann et al. 2016, 123). The employment is largely concentrated in public administration, defense, and social security (17.34%), followed by health and social services (14.67%) and scientific and technical services (8.5%) (City of Bern, 2014a). Although the City of Bern is not an economical thriving Swiss city (Kaufmann et al. 2016), Table 16 shows that its RIS features the highest ratio between KIBS jobs and high- and medium-tech manufacturing jobs. This feature of Bern's regional economy is arguably a consequence of its capital city functions. First, Bern is a crucial location for KIBS firms that are involved in public

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<sup>26</sup> This 142'000 full-time equivalent jobs are based on a total of 185'132 jobs (City of Bern 2015).

procurement. For example, KIBS firms that are involved in complex information technology projects establish formal and informal linkages to learn about government specific needs and preferences (Warland and Mayer 2016). On the other hand, due to its specialization in capital city functions, the region lacks an important manufacturing base.

Table 16: Ratio between KIBS jobs and manufacturing jobs in Swiss cities

Sector	Bern	Zürich	Geneva	Basel
KIBS	30'877	112'074	37'972	36'321
High-tech industry	8'429	33'402	20'133	41'948
<b>Ratio</b>	<b>3.7</b>	<b>3.4</b>	<b>1.9</b>	<b>0.9</b>

Source: Swiss Federal Statistical Office (2013)

Bern's knowledge-based firms are predominantly clustered in energy & cleantech, health as well as ICT (Bern Wirtschaftsraum 2012). The energy & cleantech cluster profits from the spatial proximity to the key federal departments and sectors organizations such as the Swiss Federal Office of Energy, the Swiss Federal Office for the Environment and the MINERGIE Agency (Volkswirtschaftsdirektion des Kantons Bern 2010). Additionally, the medical sector is growing at a fast pace. The local hospital, called *Inselspital*, generates innovation spillovers for the whole region (Interview K. Stämpfli). The whole value chain in the medical sector is present in Bern (Interviews: Bratschi, Bucher). The plan is to develop the *Inselspital* in a regional medical hub and put an emphasis on positioning the hospital as a center for advanced medical methods (Mayer and Sager 2013, 12). However, an interviewee assesses the cluster building of medical technology firms as being in only in an early stage (Interview Jocham). The ICT cluster is the second biggest in Switzerland after Zürich which can be explained by the presence of the federal government and its large procurement demands for ICT services (Warland and Mayer 2016). ICT firms locate in spatial proximity to the federal government in order to establish trust and being close to the source of information about potential new federal tenders services (Warland and Mayer 2016). Moreover, ICT firms profit from having public sector clients because it directly enhances their reputation. Having a good reference from a federal agency signals competences to both potential public and private sector clients services (Warland and Mayer 2016).

Furthermore, formerly state-owned companies are important actors in the knowledge application and exploitation subsystem. The *Schweizerische Post* (Swiss Post) and Swisscom, the leading telecom firm in Switzerland, as well as the national train company *Schweizerische Bundesbahnen* (SBB, Swiss Federal Railways) are headquartered in Bern. Given the increased complexity of products and services these companies offer, they rely on external sources of knowledge including suppliers, competitors, and research organizations (Kaufmann et al. 2016, 123). Recently, the two Chinese

telecommunication firms ZTE Corporation and Huawei, for example, located branch offices in Bern to be in close proximity to Swisscom. However, the formerly state-owned companies' system of suppliers and partners are by no means limited to the agglomeration of Bern. Most of the formerly state-owned companies cooperate with the technical universities in Zurich or Lausanne and they recruit qualified talent from all regions in Switzerland.

#### Knowledge generation and diffusion subsystem

The University of Bern and the Bern University of Applied Sciences are the two most important education organizations based in Bern. Warland and Mayer (2016) found in a study of Swiss ICT contracting firms that the Bernese universities seem to be more important regarding its educational function than in providing research opportunities and technology transfer for KIBS firms that are involved in public procurement. Thus government contractors seem not to depend on the kind of knowledge that universities supply in research collaboration. Sector organizations are not able to step in for the lack of knowledge interaction between the subsystems and within the knowledge generation and diffusion subsystem. Local and regional economic development agencies take a passive stance on innovation activities and thus are not able to generate many linkages between the actors of the RIS (see subchapter 5.2.1). Only a few sector organizations exist that facilitate knowledge interactions between federal agencies and the government contractors' community (Warland 2016c). The Bernese RIS lacks public research organizations as they are tied to the Federal Technological Universities (ETH Zürich and EPFL Lausanne) and thus not located in Bern.

#### RIS development

The RIS in Bern features all three RIS failures. The RIS can be characterized as organizational thin. Especially organizations in the knowledge generation and diffusion subsystem are missing. This leads to insufficient knowledge interaction both within and between the subsystems, i.e. fragmentation. Furthermore, the RIS is overspecialized as all sectors are closely linked to the capital city function. For example, Warland and Mayer (2016) show that the public procurement activities are not able to generate products and services that can be exploited through private sectors clients.

#### 5.1.4. Multilevel governance setting

Bern does not face many constraints ensuing from federal level, but its local autonomy is restricted by the strong role of the Canton of Bern. The City of Bern enjoys a high level of local tax autonomy. The institutional fragmentation of the FUA Bern is low. The FUA Bern consist of 38 municipalities and a cantonal border only crosses the FUA at the very margins. Political actors dominate local governance but they are taking a rather passive stance on locational policies formulation.

### Public-vertical dimension

The Canton of Bern and the Confederation are the two higher-tier governmental levels potentially restricting the local autonomy of the City of Bern. Policy-making in the Swiss MLG setting is dependent on cooperation of all government levels. This often leads to interlocking politics “meaning that the planning, financing, and implementing of governmental task, although formally conducted by separate bodies, are in practice intertwined in various ways” (Kübler 2009, 245). Compared to other federal states the municipal autonomy in Switzerland can be considered to be high as Swiss municipalities enjoy residual powers i.e. they can legislate in areas where the superior bodies have not legislated (Kübler 2009, 245). In addition, cantons also have quite strong subsidiary powers. The rules of Swiss federalism prohibit direct communication between the federal level and the municipal level. Thus, in theory should all contact between the state and the capital transit via the cantonal authorities. Thus, the cantons occupy a central role in the Swiss multilevel governance setting and they are the most powerful political entities in the formulation and implementation of policies (Sager and Zollinger 2011).

Legally, the capital city is treated like any other Swiss municipality. This would mean that the City of Bern has to navigate like any other Swiss municipality through the MLG setting. Practically, however, local decision makers have better access to their federal counterparts given their spatial proximity and the federal level coordinates with the Bernese local government rather pragmatically and consensus-oriented (Kübler 2009, 253). The specifics of financing the capital city is regulated by a legal document from 1875 whose “content is absolutely irrelevant at present” (Kübler 2009, 252). The City of Bern bears capital city related costs such as security services and cultural activities. The federal government agreed in the late 1990s to a lump sum payment to compensate for extra security costs in the capital city (around 4.8 Million CHF annually). As the city police merged with the cantonal police the security payment is consequentially collected by the canton (Kübler 2009, 255). Furthermore, Bern receives a lump sum of 1 Million CHF for supporting culture institutions, activities and special events that represents the nation state (Tobler 2013, 306). Yet, the loss of tax income due to tax exemption on federal infrastructure or embassies is not compensated by payments in lieu of taxes.

The fiscal setting in Switzerland is characterized by extensive taxing powers of all three state levels as all levels “are entitled to levy direct taxes on income and the fortunes of physical persons, taxes on the yield and capital of legal persons and property taxes” (Kübler 2009, 246). The cantons and the municipalities have the power to set their own tax rates. Compared to other OECD countries, municipalities and cantons in Switzerland enjoy a high level of tax autonomy. The municipalities raise 15.16% of all taxes which is the 8<sup>th</sup> highest local tax autonomy of 34 OECD countries. The

cantons raise 24.21% of all taxes which puts them in second place from the 10 listed OECD countries (OECD 2014b).

Such a high fiscal autonomy may lead to fiscal revenue differences between the municipalities and the cantons. The federal level set up a system of fiscal equalization to compensate for the most striking differences. The Canton of Bern is the biggest net receiver in the Swiss fiscal equalization scheme (CHF 1.3 billion a year) and the seventh largest receiver per capita (CHF 1'250 per capita a year) (Kaufmann et al. 2016, 124). A similar fiscal equalization scheme exists among the municipalities in the Canton of Bern. The City of Bern is an above average performing municipality in the canton and therefore, the city should be a contributor to the cantonal-level equalization scheme. However, because core cities are facing disproportionately higher financial burdens than suburban municipalities such as policing, culture and leisure, health, transportation and social welfare, the City of Bern receives a lump sum of around CHF 63 Million per year. This makes Bern a net receiver of CHF 26 million annually in the cantonal fiscal equalization scheme (Kaufmann et al. 2016, 124).

Table 17: Local revenue composition City of Bern

<b>Budgetary items</b>	CHF in thousands	%
Property taxes	39'771	2.63
Personal taxes	642'483	42.47
Corporate taxes	150'058	9.92
Other taxes	61'223	4.05
Sales and gross receipt tax <sup>1</sup>	0	0
User fees	200'703	13.27
Patents and concessions	1'654	0.11
Assets	154'104	10.19
Federal governmental transfers <sup>2</sup>	0	0
Cantonal governmental transfers	167'603	11.08
Cantonal fiscal equalization scheme	63'254	4.18
Payments in lieu of taxes	0	0
Miscellaneous	31'835	2.1
<b>Total</b>	<b>1'512'689</b>	<b>100</b>

Sources: Federal Finance Administration (2016), data from 2014.

Notes: <sup>1</sup> These tax instruments are prerogatives of the federal level. <sup>2</sup>The lump sum of 1 Million CHF for cultural activities is not recorded in the data of the Federal Finance Administration and thus not displayed in this table.

Taxes levied on personal income and personal property are by far the highest revenue source in Bern (see Table 17). Taxing residents is thus four times more important for the revenue budget of Bern than taxing corporations. Despite the lump sum for cultural activities (that is not accounted by the Federal Finance Administration), Bern does not receive any compensation from the federal level, but receives about 15% of its revenue from the cantonal level.

## Public-horizontal dimension

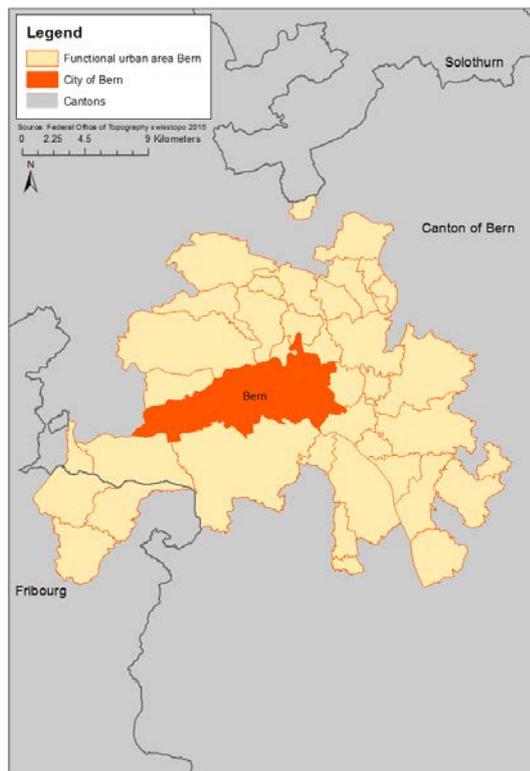


Figure 3: Map of FUA Bern

Cartography: Mario Huber

The FUA Bern is horizontally institutionally fragmented as the municipalities in the region feature small surface areas when compared internationally. The vertical institutional fragmentation is low, because only three municipalities belong to the neighboring canton of Fribourg (see Figure 3). The municipal administrations in the agglomeration of Bern are well embedded in an institutionalized cooperation called regional conference (*Regionalkonferenz*) that is active in fields of public transport infrastructure, land-use and culture. Kübler (2009, 258) assesses these attempts to foster inter-municipal coordination as progressive tools for tackling governance problems in agglomerations. Other Swiss cities like Basel, Lausanne and Geneva are lacking such an institutionalized cooperation (Sager, Kaufmann, and Joye 1999).

## Local governance dimension

The local governance regime is fragmented between dominating political actors and various, loosely connected private interest groups. A comparative analysis by van der Heiden (2010) points to the dominance of public actors in the Bernese local governance regime: “The few international activities of the City of Bern are clearly in the hands of the city administration. Private actors and the public are wholly excluded from Bern’s few international activities” (van der Heiden 2010, 44). Van der Heiden’s (2010) observation is corroborated by my interview data. For example, an influential business representative assessed the interactions between public and private actors much more dynamics in Zürich than in Bern (Interview Bucher). Von Bergen and Steiner (2013, 24–25) relate the domination of political actors to a law passed in 1747 that prohibits the Bernese aristocrats to be active in commercial trade and industrial companies. This law is an idiosyncrasy in the economic history of Switzerland. Another business representative refers to the political dominance of the social democratic and the green party that would make it difficult for business representatives to bring in their ideas into the political process (Interview Jocham).

The fragmentation of the local governance regime is not limited to the public-private divide. Various interests groups operate rather isolated from each other. For example, the influential private business leader group called *Berner Runde* (Circle of Bern) consists of around 12 members who keep a low public profile and thus a clandestine image for non-members (Interviews: Messerli, Steiner). Another interest group of influential business leaders is called *Fokus Bern* (Focus Bern). Although these two groups share a basic problem understanding, they are not able to produce any synergies (Interviews: Gasche, P. Stämpfli). Another organization is *Bern Neu Gründen* (Refounding Bern), a more politically orientated group, with the goal to amalgamate the core municipalities in the FUA Bern or at least strengthen the cooperation between them. Besides these three presented groups, several more initiatives are present in Bern but they are all rather loosely connected.

## 5.2. Locational policies in Bern

Locational policies are formulated and executed on three levels: local, cantonal, and regional. At the local level, the executive economic development agency called Economic Area Bern (*Wirtschaftsraum Bern*, EAB) exists. The EAB is part of the department of security, environment and energy of the City of Bern. The EAB provides services not just for the City of Bern, but has as well for 33 municipalities in the agglomeration of Bern.<sup>27</sup> Each municipality pays annually 0.7 Swiss Franc annually per inhabitant to finance the EAB (Interview K. Stämpfli). On the one hand, EAB is a broker organization as it fosters and maintains local firm networks. On the other hand, EAB serves as the contact point for local firms if they need something from the administration (Interview K. Stämpfli). The relevant economic development plan stemming from the EAB is the ‘Strategy 2020’ (Bern Wirtschaftsraum 2012).

On the cantonal level the Bern Economic Development Agency (*Standortförderung Bern*, BEDA) is the relevant body involved in formulating and executing locational policies. In 1971 the first cantonal economic development agency were established following a report that pointed to the unfavorable sector composition – agriculture, machinery and metal industry, service economy only in relation to the public administration – as the prime factor for the comparatively low tax revenues of the Canton of Bern (von Bergen and Steiner 2013, 66–67). Currently, the BEDA mainly focuses on supporting cluster organizations, brokering land and real-estate for firms, and supporting the development of crucial infrastructure such as the airport, exhibition sites and international schools

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<sup>27</sup>This 33 municipalities constitute the sub-conference economy (*Teilkonferenz Wirtschaft*) of the regional conference Bern-Mittelland (*Regionalkonferenz Bern-Mittelland*). Six regional conferences exists in the Canton of Bern.

(Interview Gehrig). The relevant cantonal economic development plan is the ‘Economic Strategy 2025’ (*Wirtschaftsstrategie 2025*; Volkswirtschaftsdirektion des Kantons Bern 2010)

On the regional level, the city and the Canton of Bern cooperate with four other cantons and eighteen other cities or regions in a non-profit organizations for regional cooperation called Capital Region Switzerland (*Hauptstadtregion Schweiz*, CRS). This regional coordination organizations is mainly a political vehicle for coordinating economic development policies, for lobbying on the federal level and for positioning the region in the middle of Switzerland in the top-tier of the Swiss urban system (Kaufmann et al. 2016, more in subchapter 5.2.5).

### 5.2.1. Innovation policies

Bernese authorities concentrate on cluster policies. Cluster policies mainly focus on highly-regulated sectors. Two substantial ‘triple helix’ organizations – *sitmem Insel* and the *Innocampus* – have been developed out of the clusters. Strategies to foster start-ups and to better exploit the knowledge infrastructure are largely missing.

#### Cluster policies

Cluster policies are formulated by all three levels (local, cantonal, regional; see Table 18). The medical technology cluster and the energy & environmental technology cluster are coherently supported by all three levels. Both clusters represent highly regulated sectors. The firms in these clusters profit from spatial proximity to regulatory authorities, sector organizations and decision makers in Bern. The ICT firms, another typical capital city cluster, stems largely from federal procurement demands. The precision industry and the food industry are not present in the city but in the rural areas of the canton showing the large heterogeneity of firms present in the wider Bern region.

Table 18: Cluster policies in Bern

Local: <i>Economic Area Bern</i>	Cantonal: <i>Bern Economic Development Agency</i>	Regional: <i>Capital Region Switzerland</i>	Relation to the capital city function
Medicinal technology & pharmaceutical products	Medical technology	Medical technology	Highly regulated sector
Energy & environmental technology	Energy & environmental technology	Smart region (energy)	Highly regulated sector
-	ICT	-	Public procurement
-	Precision industry	-	None
-	-	Food industry	None

On the local level the EAB aims for building networks of firms in the areas of medicinal technology as well as energy and environmental technology. The goal is to foster knowledge transfer between

these firms and to further expand these networks (Interview K .Stämpfli; Bern Wirtschaftsraum 2012). First cluster strategies on the cantonal level had been formulated in the mid-1990s. Currently, the BEDA supports four clusters: medical technology, energy & environmental technology, ICT, and precision industry (Interview Gehring). The ICT cluster is the oldest cantonal cluster. The cluster precision industry gathers rather small firms that are highly export driven and located in the rural area of the canton. The CRS identified three economic sectors in which they want to launch economic development projects on the regional level. These sectors are medical technology, the energy sector (under the label ‘smart region), and food industry (Interviews: Fluri, Nietlisbach, Tobler).

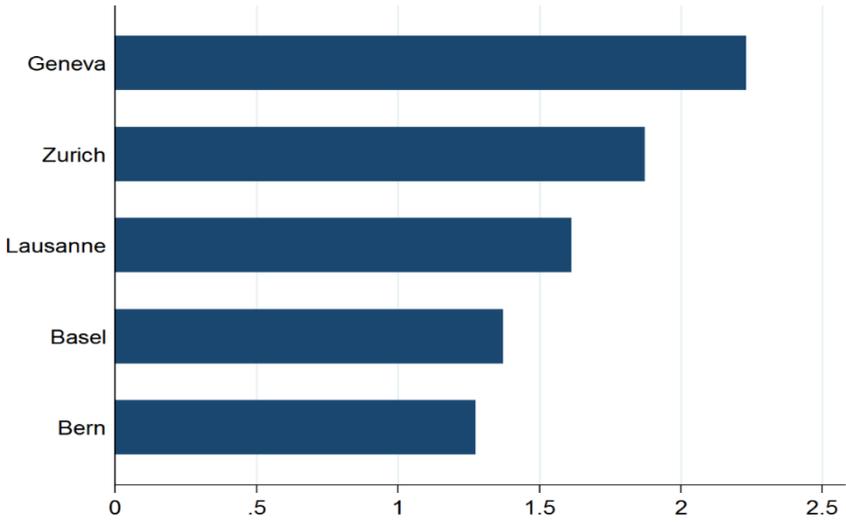
In order to increase the interactions between the crucial ‘triple helix’ actors, two potentially interesting organizations starting to emerge in Bern. In the medical sector, *sitem-Insel* was established in 2015 in the local hospital to operate as a public-private partnership for researching, training, enabling and promoting translational research. Regarding high-tech innovation, the cantonal authorities succeeded in obtaining one of five Swiss innovations parks. The public-private partnership *Innocampus* will be located in the city of Biel that is a secondary city in the Canton of Bern. The successful bid contained a portfolio of high-tech solutions for the medical sector, 3D metal printing, energy storage and energy mobility (Interview Gehrig).

#### Start-up promotion

Few strategies exist to tackle the lack of start-up promotion or access to venture capital funding. In general, the region lacks entrepreneurial spirit and regional-orientated investors (Interview Steiner). The absence of a technological university may explain this lack of entrepreneurship (Interview Gehrig). A regionally well-known private investor established in Thun – a medium-sized city 30 minutes train ride away from Bern – an innovation lab with help from the federal technological university in Zürich (ETH Zürich) and Stanford University (Interview Müller). The Canton of Bern provides a fund of CHF 50’000 annually to support start-ups and small firms (Interview Gehrig).

The presence of the federal government may be another reason for the lack of an entrepreneurial dynamic. The federal government, as the largest and arguably one of the most stable employers in the region, absorbs much of the talent that may have the potential to take the risk and start their own firm (Kaufmann et al. 2016, 123). The weakly developed start-up infrastructure, the lack of venture capital and the federal presence manifest itself in low number of start-ups founded in Bern. Among the five largest agglomerations in Switzerland, Bern shows the lowest rate of new firm formation (see Figure 3).

Figure 4: Number of start-ups per 1000 inhabitants in Swiss agglomerations



Source: Swiss Federal Statistical Office (2015c): Business Demography 2013; Swiss Federal Statistical Office (2015a): Municipalities Statistics 2013. Data from 2013.

Knowledge infrastructure

Few strategies tackle the fragmentation between the Bernese universities and other crucial economic players in the region such as the state-owned companies, cluster organizations or anchor firms. The Bern University of Applied Sciences is active in the *Innocampus* and the University of Bern in the *sitem-Insel* but both projects are rather marginal in size. Thus, Bern has some un-tapped opportunities regarding the interactions between the knowledge infrastructure, the public sector and the private sector (Interview Bucher; Mayer and Schnyder 2012; Kaufmann et al. 2016, 127). Thus, the knowledge infrastructure may be important in educating a highly-skilled workforce, but does not engage much in contract research or technology transfer (Warland 2016c, 13).

Testing expectation 1.1

*E1.1: A weakly developed RIS restricts the formulation of innovation policies.*

Expectation 1 is not supported. In fact, in Bern only an inadequately developed RIS exists and only a few innovation policies have been formulated. However, it seems that it is not the RIS, i.e. the regional economy, which restricts the formulation of innovation policies but decision makers that are not prioritizing innovation policies.

The two economic development agencies, EAB and BEDA, take a passive stance on innovation policies. For example, the EAB is active in organizing events and network opportunities for firms but does link firms to knowledge institutes or federal organizations. The cantonal organization BEDA mainly supports cluster organizations (Interview Gehring). Neither the BEDA nor the EAB

substantially foster entrepreneurship and start-ups (Interviews: Bucher, Müller). As the Canton of Bern features a heterogenic economic sector composition, the BEDA has to formulate a broad range economic development policies and thus is not really focused on strengthening the innovation potential in the agglomeration Bern. The EAB, on the other hand, is not able to fill this vacuum. The CRS, on the regional level, is mostly a political project of high ranking decision makers with limited ability and willingness to formulate innovation policies (Interviews: K. Stampfli, Tschäppät).

### Testing expectation 1.2

*E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.*

Expectation 1.2 is partly supported. Few innovation policies are formulated in Bern besides cluster policies. However, *sitem-Insel* and *Innocampus* directly target constraining elements of the RIS. These two newer innovation tools try to improve the weak linkages between actors from the ‘triple helix’. Both organizations incorporate firms, knowledge institutes as well as federal organizations and are thereby exploiting the place-specific advantage of a capital city. Besides these two promising initiatives that target the fragmented RIS, no innovation policies aim at the other two Bernese RIS failures, i.e. organizational thinness and lock-in.

### 5.2.2. Image building

Decision makers put a lot of effort in positioning Bern as the political center of Switzerland. The capital city image strategy is pushed forward on the local and the regional level. Strategies to position Bern as a business city are not detectable. Important clusters of Bern, for example medical technology or the energy sector, are not exploited in the image building strategies.

The capital city image building strategy is prominently mentioned in the economic development plan ‘Strategy 2020’ by the EAB as one of six core strategies (Bern Wirtschaftsraum 2012, 11–12). The ‘Strategy 2020’ does not link image building with either the medical technology sector or the energy sector. The Canton of Bern, for its part, only rarely puts forward the image of itself as the Swiss political center. The only references to the capital city function are made in the acquisition firms in which the spatial proximity to decision makers of all governmental levels is highlighted as an asset (Interview Gehrig). However, the canton perceives the CRS as the relevant image building platform. Together with the City of Bern, the Canton of Bern has been the driving forces behind the establishment of the CRS. The CRS argues that the capital city should not be measured by economic success only, but by its function as the place where political decisions are negotiated and implemented.

## Testing expectation 2

*E2: A weakly developed RIS enables the formulation of a capital city image building strategy and constrains the formulation of a business town image building strategy*

Expectation 2 is supported. Image building activities are consolidated on the regional level. The CRS is an image building vehicle for both the city and the Canton of Bern. The CRS explicitly positions and markets the region as the political center of the nation and as such differentiating Bern from the three economically stronger metropolitan regions (Mayer et al., 2013, 11). This political function after all, as the initiators of the CRS argue, is important for the prosperity of whole Switzerland. Thus, the capital city status is a unique selling proposition that allows Bern to shift the focus away from its economic inferiority towards its political superiority.

### 5.2.3. Business prerequisites

The City of Bern features high tax rates compared to other Swiss jurisdictions. The Canton of Bern has some discretionary power in offering tax breaks for companies. The City of Bern focus mainly on providing an attractive environment for residents.

#### Taxes

The fiscal setting in Switzerland is characterized by extensive taxing powers of all three state levels. The local as well as the cantonal level enjoy high fiscal autonomy which allows them to set their own tax rates for the taxation of residents, property, and corporations. Both the City of Bern and the Canton of Bern feature comparably high tax rates for residents as well as for firms. In a Swiss comparison, the Canton of Bern features the ninth highest tax rate for residents and the fifth highest tax rate for firms out of 26 cantons (Credit Suisse 2014, 13). The Canton of Bern raises 75% of its taxes from private individuals (65.4% is the Swiss average) and only 9.1% from firms (16.7% is the Swiss average) (Credit Suisse 2014, 30). The City of Bern also strongly relies on personal income tax as 42% of all local revenue stemming from residents (see Table 17).

A lot of interview partners assess the comparably high tax rates as one of the main challenges of the Bernese regional economy (Interviews: Gehrig, Jocham, Müller, K. Stampfli, Tschäppät). As any other Swiss canton, the Canton of Bern has the competence to grant discretionary tax breaks for corporations and such tax breaks are granted if a company meets certain criteria (see subchapter 3.2.4). The Canton of Bern does not grant any tax breaks for start-ups or entrepreneurs (Interview Gehrig).

### Provision of land and real estate

The showpiece of the City of Bern is the new business park *WankdorfCity* in the Northeast of Bern which became operative in summer 2014. The Swiss Post and the national train company SBB are among others headquartered in this business park. *WankdorfCity* should host about 3'000 jobs and further development is planned while the City of Bern searches for investors (Lambelet 2015, 12–14). However, the business park faced some political opposition in its establishment. For example, the cantonal authorities had to mediate between the adjoining municipalities of Ittigen and Ostermundigen and the City of Bern in order to save the jeopardized project in its initial phase (Sager 2002, 191–92). The plebiscite of the city was always supportive of *WankdorfCity*. The referenda concerning the business park was won with more than 70% approval (Lambelet 2015).

The efforts regarding provision of land and real estate seem relatively well coordinated between the different governmental levels. The lead has the cantonal BEDA as it serves as the contact point for firms that want to expand or relocate. In a second step, the BEDA contacts different Bernese municipalities to inquire if they could provide suitable land reserves or real estate (Interview Pfyl). However, land-use planning in the small-scaled agglomeration of Bern is a difficult task, either because few land reserves exist (Interviews: Gasche, Gehrig, K. Stampfli), or because the planning and zoning is done rather conservatively (Hermann 2013). Moreover, the different agglomeration municipalities seem not to coordinate their land-use plans for the greater good of the whole agglomeration (Interviews: Rytz, K. Stampfli, Walter).

### Testing expectation 3

*E3: High tax autonomy enables to focus on income tax and constrains other manifestations of the business prerequisites category.*

Expectation 3 is not supported in the case of Bern. First of all, the Canton of Bern has the discretionary power to make use of taxes as a locational policy instrument. However, the financial difficulties of the canton do not allow for much 'room to maneuver' regarding lower tax rates. As a consequence, the City of Bern turns to other local assets that makes the city attractive for firms and residents.

On the one hand, Bern is active in developing land and real estate such the business park *WankdorfCity*. However, developable land in the City of Bern is rather scarce. On the other hand, the City of Bern focus on so-called soft factors that target residents rather than firms. The strategies are to maintain green spaces, ensure cultural activities, preserving the old town or establishing international schools for expats children (Interviews: Gehring, Tschäppät). This measures should altogether ensure the quality of life in the city what should attract wealthy tax payers. In sum, the

City of Bern does not have much capacity to change these ‘hard factors’ of the business prerequisite locational policies category. Therefore, the city rather concentrates in quality of life policies.

The focus on quality of life issues may not only be triggered by constraints in lowering taxes or by the scarcity of developable land. The revenue side of the local budget reveals that the personal income tax is by far the most important local revenue by making up 42% of the local income. Thus, it makes sense to enlarge this particular tax base. Furthermore, the City of Bern is governed by Social Democrats in a strong partnership with the Greens. The aforementioned quality of life policies fit the political agenda of the ruling parties.

#### 5.2.4. Acquisition

The acquisition of firms and investments in top-down organized in a three step process. On the international level, either a federal organization or an organization of six Western cantons establishes first contact with potential firms and investors. Secondly, the different cantons may hand in competitive bids to attract these firms and investments. The different cantons are competitors in that step. In the third and final step, the Canton of Bern reaches out to Bernese municipalities and inquires if they have suitable land reserves or real estate for the attracted firms.

Generally, the City of Bern aims to attract firms for their med tech cluster or for the energy and clean-tech cluster (Bern Wirtschaftsraum 2012). However, neither one of the economic development agencies, i.e. EAB or the BEDA, are directly acquiring firms on the international level (Interviews: Gehring, K. Stämpfly, Pfyl). The Canton of Bern is both a member of Swiss Global Enterprise (SGE), a mandated agency on the behalf of the Swiss Confederation to strengthen Switzerland as a global economic hub, as well as of the Greater Geneva Berne Area (GGBa), an initiative of the six cantons in Western Switzerland. Both governmental organizations should concentrate the forces of the cantonal economic development agencies in order to be competitive in the international competition. The SGE and the GGBa establishes the first contact to firms and investors (Interview Gehrig). Thus, neither the Canton of Bern nor the City of Bern directly acquires firms or investment on the international level.

In a second step, it is the responsibility of the Canton of Bern to offer competitive bids and package deals to attract firms. As any other Swiss canton, the Canton of Bern has the authority to grant discretionary tax breaks for firms. The maximum is ten years exemption from corporate income tax and capital gains tax. Companies that want to relocate to Bern or want to invest in Bern may be eligible for tax breaks if they meet certain following criteria: They have to be innovative, export-oriented, job-generating, fitting to the existing cluster and, more generally, they have to be assessed

as substantial for the Bernese economy (Interview Gehrig). In a third, step the BEDA reaches out to the different Bernese municipalities to ask if they have suitable land reserves or real estate for hosting these firms (Interview Pfyl). A recent example is the establishment of a production facility of a globally leading bio tech company in a small town in the North of the Canton of Bern. Experts are sure that discretionary tax breaks have been part of the package deal whereas they were probably not the most decisive argument (Berner Zeitung 2014).

#### Testing expectation 4

*E4: A weakly developed RIS constrains the adaption of a profound and large-scale acquisition strategy.*

Expectation 4 is not supported. The whole acquisition strategy in Switzerland is organized top-down. The City of Bern does not have much discretionary power in acquiring firms or investments, at least not on an international level. Thus, the hands of the municipalities are tied. The best they can do is to provide suitable infrastructure and to pursue an active land-use zoning. Thus, municipalities in the agglomeration of Bern concentrate rather on the development of residential infrastructure and quality of life issues because in such policies they have more competences. It is thus rather the MLG setting, i.e. the strong role of the canton, which better explains the acquisition strategies than the RIS.

#### 5.2.5. Coordination

In Bern, coordination efforts taking place on two agglomeration level and the regional level. In the agglomeration Bern, the City of Bern and the agglomeration municipalities cooperate in an institutionalized organization called Regional Conference Bern-Midland (*Regionalkonferenz Bern-Mittelland*, RCBM). On the regional level, the non-profit organization CRS coordinates political activities of cantons and cities. Both organizations consist solely of public actors and both organizations are not able to substantially coordinate locational policies. While the jurisdictions are not actively coordinate their locational policies, they also avoid engaging in direct (tax) competition. Thus, in Bern prevails a type of negative coordination.

85 municipalities in the FUA Bern are part of the RCBM that is mostly active in the policy fields of public transport infrastructure, land-use planning, and cultural activities. Other Swiss cities lack such institutionalized cooperation. Thus, Kübler (2009, 258) assesses the regional conference as progressive tools for tackling regional collective action dilemmas. Regarding locational policies, 33 municipalities of the RCBM cooperate in the Sub-Conference Economy (*Teilkonferenz Wirtschaft*). However, little willingness can be detected to coordinate locational policies (Interviews: P.

Stämpfli, Rytz). For example Köniz, the second biggest municipality in the agglomeration of Bern and the twelfth largest city in Switzerland, does not coordinate any locational policy with neighboring Bern (Interview Pfyl).

Also van der Heiden (2010) found no coordination between municipalities in the agglomeration of Bern with regard to their international activities because they fear that this would restrict their political autonomy (van der Heiden 2010, 45; van der Heiden, Koch, and Kübler 2013, 48). The low willingness for coordinating locational policies manifest itself as well in several blocked or refused public development projects in the agglomeration of Bern. For example, the cantonal authorities mediated between municipalities to save the jeopardized project of a new business park (see subchapter 5.2.3). Other examples are popular referenda that rejected projected tram lines connecting the core city with the agglomeration of Bern in 2004 (see Sager 2008). In 2015, a projected tram line to connect Bern with Köniz was rejected. The electorate of the City of Bern has approved the new tram line but the project was terminated because it had no electoral support in the two municipalities Köniz and Ostermundigen.

On the other hand, there is little competition between the municipalities in the FUA Bern. Both the Mayor of Bern and the economic development officer of Köniz agree that it is beneficial for their municipality if a firm settles anywhere in the agglomeration (Interviews: Pfyl, Tschäppät). In sum, the municipalities in the FUA Bern are rather indifferent towards coordinating locational policies. These missed coordination opportunities in the agglomeration of Bern is seen by some interviewee partners as one of the major causes for Bern's decreasing importance in the Swiss urban system (Interviews: Bucher, Gasche).

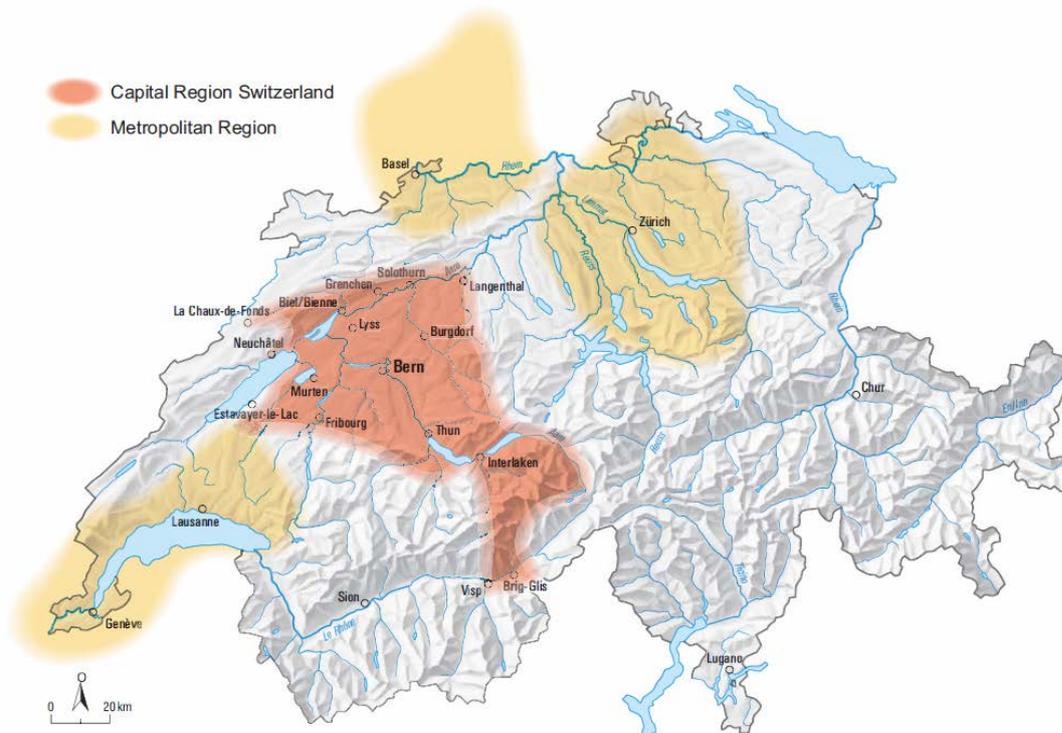
On the regional level, the CRS coordinates activities of five cantons and nineteen cities or regions. Thus, it is a multilevel governance project. The perimeter of the CRS is rather large and includes areas – such as those in the canton of Valais – that are about an hour train ride from Bern (see Figure 5).<sup>28</sup>The City of Bern is the economic center of the CRS in terms of economic power and jobs (INFRAS 2009, 11). The CRS was established after the decision of the Swiss Federal Office for Spatial Development in 2008 to designate three Swiss metropolitan regions as growth centers, namely Zurich, Basel and the Geneva/Lausanne region (*Bassin Lémanique*), and consider Bern as an urban agglomeration and thus of secondary importance for Switzerland. As a reaction, the city and

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<sup>28</sup>These rather remote areas showed interest in a CRS membership because a large share of their population commutes to Bern for work (INFRAS 2009, 34) and because they would have otherwise not been associated or in close proximity to other metropolitan areas.

cantonal decision makers became active in recruiting partners for this new organization (Interviews: Buchmüller, Tschäppät).

Figure 5: The perimeter of the CRS and other Swiss metropolitan areas



Cartography: Alexander Hermann, University of Bern

The aim of the CRS is to cooperate on projects that advances the whole region such as promoting Bern as a political center, developing key economic sectors, ensuring the critical role of the capital city region as a transportation hub or bridging the different cultures in the French- and German-speaking part of Switzerland. Yet, the CRS is mainly a political vehicle for lobbying on the federal level and for positioning the region in the middle of Switzerland in the top-tier of the Swiss urban system (Interview Tobler; Kaufmann et al. 2016, 126–27). As a consequence, the priority rests on political locational policies, namely coordination and asking public funds and compensation payments.

### Testing expectation 5.1

- I. Agglomeration level: *Low institutional fragmentation enables and high local tax autonomy constrains regional coordination what leads to negative coordination.*
- II. Regional level: *High institutional fragmentation and high local tax autonomy constrain regional coordination.*

Expectation 5.1 is supported in the case of the agglomeration Bern, as well as on the regional level. Whereas I can detect the counteracting effects in the agglomeration Bern, on the regional level hinders vertical institutional fragmentation the coordination of locational policies. In the case of the agglomeration of Bern, alternative explanations such as fear of ceding local autonomy and a political divide between the city and the agglomeration municipalities may cause this type of negative coordination. In the case of the CRS, the vertical institutional fragmentation increases not only the complexity in decisions-making but it creates as well an unlevel playing field of tax rates what increases the tax competition between the members of the CRS.

The two proposed explanatory factors plus two additional factors can explain negative coordination in the agglomeration Bern. First, low vertical institutional fragmentation and the existing coordination bodies of the Canton of Bern restrict harmful beggar my-neighbor behavior. Thus, the canton diffuses a consolidating order on the agglomeration Bern. Secondly, due to high tax autonomy, the municipalities compete moderately on attracting residents. There is few competition regarding attracting firms because acquiring firms and investments is the prerogative of higher-tier governmental levels (see subchapter 3.2.4). However, the municipalities do not coordinate their policies in, for example, land use planning because zoning is crucial in attracting new residents (Interviews: Gasche, Rytz, P. Stämpfli, Walter). Thirdly, there is resistance towards anything that could potentially constrain the municipal political autonomy. It seems that the decision makers as well as the local population in the agglomeration municipalities are not willingly to restrict their political autonomy in favor of collective actions that could enhance the welfare of the whole agglomeration. (Interviews: Bratschi, P. Stämpfli, Rytz; van der Heiden 2010, 43-44). Finally, the interviewees point at a partisan divide that exists between the agglomeration municipalities and the core city. Whereas the City of Bern is politically a stronghold of the social democratic and green parties, the agglomeration municipalities are dominated by moderate-right and conservative-right parties (Interviews: Bratschi, Gasche, Rytz).

In the following, I test expectation 5.1 in the case of the regional coordination in the CRS. Because the perimeter of the CRS is larger as the agglomeration of Bern, I can test expectation in 5.1 by adding vertical and horizontal institutional fragmentation.

The large perimeter of the CRS translates itself to a high vertical and horizontal institutional fragmentation. Many interviewees are skeptical about such a large perimeter and they recall the coordination problems of the CRS's predecessor organization *Espace Mittelland*<sup>29</sup> (e.g. Bratschi 2013; Steiner 2013). However, what distinguishes the CRS from *Espace Mittelland* is the introduction of variable geometry, which now allows members to engage only in projects that they are interested in (Interviews: Buchmüller, Fluri, Tschäppät). This variable geometry reduces decision-making barriers that a more institutionalized coordination form brings with it.

The vertical institutional fragmentation, i.e. the different cantons, does not just increase the complexity in decision-making, but also increases the differences in the tax rates. Vertical institutional fragmentation thus creates an unlevel tax competition in which the jurisdictions are more likely to compete fiercely (Kaufmann and Sager 2018). In fact, the cantons of Bern and Fribourg are heavy competitors in attracting residents (Hermann 2013; Interviews: Bucher, Gasche, Tobler, Tschäppät). Thus, the CRS project is a walk on a tightrope. It is a political partnership but the different jurisdictions are simultaneously competitors in attracting tax revenue (Interviews: Buchmüller, Fluri, Walter). This is reflected by the statement of a high ranking politician in the City of Bern: “Whereas we see it beneficial for the whole region if a company relocates to Fribourg, where the new residents are going to live is another question and this issue is more competitive” (Interview Tschäppät). The unlevel playing field of tax competition seems to explain why the CRS is only successful in coordinating locational policies in issues which generate few financial consequences (e.g. image building and public funds and compensation payments).

### Testing expectation 5.2

*E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.*

Expectation 5.2 is not supported. Bern is only constrained in the local governance dimension of the MLG setting. Local governance is dominated by political actors. The private actors are fragmented in various organizations with differing policy priorities (see subchapter 5.1.4). Although a lot of interviewees see the fragmentation between the different initiatives as a problem for strengthening the economic and political importance of Bern (Interviews: Bratschi, Gasche,

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<sup>29</sup> In 1994 decision makers from the Canton of Bern together with their counterparts from the neighboring cantons of Fribourg, Neuchâtel and Solothurn founded a non-profit organization called *Espace Mittelland*. The cantonal members aimed to cooperate in economic development and ultimately to position a new functional region by focusing on key issues such as public transportation, tourism, economic promotion, culture and education (Treina and Zwiauer 1997, 16). However, the unanimous decision-making procedures the organization adopted turned out to be inflexible and *Espace Mittelland* never reached its goals. As a consequence, the cantonal members gradually reduced their involvement and the organization was dissolved in 2009 (Kaufmann et al. 2016, 126).

Messerli, P. Stämpfli, Steiner), I could not detect substantial coordination efforts between the crucial actors in Bern that would aim to overcome the constraining fragmentation in the local governance dimension.

The dominant political actors in Bern are not seeing themselves in the role of incorporating private actors into locational policies formulation or coordinating the various private sector initiatives (Interviews: Buchmüller, Nietlisbach, Tschäppät). An example is the engagement of the *Berner Runde* (Circle of Bern) after the shock in 2008, when Bern was not considered a top-tier Swiss metropolitan area in the Federal Spatial Concept. The *Berner Runde* decided to intensify their contacts with Bernese top-executive politicians. However, the political leader favored to establish the regional cooperation body CRS with only members from the relevant public administrations. The *Berner Runde* has been skeptical about such a large perimeter and wanted to strengthen Bern as the core of the region (Interview Bratschi). This dissonance led to the fizzling out of the initial promising contacts (Interviews: Bratschi, Buchmüller, Gasche, Nietlisbach). By now, the CRS consolidated into a primarily political organization with few intentions to include relevant business actors (Interviews: Tobler, Tschäppät, Walter).

Besides the *Berner Runde* several other initiatives aim to strengthen the competitiveness of the region. However, these initiatives have differing policy priorities and vary in their prioritized spatial perimeters. Recently, two retired municipal politicians initiated *Platform Bern* which is, as the name suggests, a platform that brings the different public and private organizations together. This platform meets only once a year in a public meeting without further initiating coordination activities. However, this fragmentation of initiatives is somewhat moderated by the small-scale of Bern and especially the small circle of committed public and private leaders. The interview partners describe that they know exactly with whom they have to talk given a specific issues and they mostly have met this person in a previous instance somewhere (Interviews: Bucher, Nietlisbach, P. Stämpfli).

#### 5.2.6. Public funds and compensation payments

The City of Bern tries to leverage its capital city status to target public funds. These efforts are closely connected to the image building strategy as the political center of the nation. Thus, by positioning itself as the political center of Switzerland, Bern claims that this specific role needs federal support for the good of the whole of Switzerland. Bern does not invest much in asking for federal compensation based on its capital city status.

In the beginning of 2000, local decision makers pushed for a new legal document to institutionalize capital city compensation payments (Interview Gasche). The legal arrangement between the City of Bern and the Confederation stems from an anachronistic document from 1875 in times when the City of Bern was not able to and not willing to bear the costs of the expansive capital city related infrastructure. The content of this legal arrangement is “absolutely irrelevant at present” (Kübler 2009, 252). The federal government agreed to set up a working group of the three Bernese governments (federation, canton, and the city). This working group could not agree on a list of positive and negative effects for Bern ensuing from the capital city status. As a consequence, the working group commissioned an independent analysis (Ecoplan 2004) that concluded: the added value and the job growth due to the federal presence has overall a positive effect for the region of Bern and therefore outweighs the tax losses. Given these findings, the federal government unilaterally terminated the negotiation for a new ‘capital-city legislation’ (Kübler 2009, 257).

After the disadvantageous decision in the Swiss Federal Spatial Concept in 2008, Bern’s decision maker reacted remarkably intense in the media as well by formal and informal interventions directed at the Federal Office for Spatial Development (Interviews: Poschet and Gilgen, Tschäppät) although no direct money is attached to the Swiss Federal Spatial Concept. It seems that Bern’s decision makers have interpreted it as a downgrade that harms Bern symbolically that may also come along with tangible negative implications for future infrastructure funding decisions by the federal government (Interview Tschäppät). This includes federal funding for big infrastructure projects, such as the expansion of the train system which is a major concern for Bern’s decision makers (Interviews: Tobler, Tschäppät).

Subsequently, the CRS have been established as a powerful image building vehicle by reframing Bern’s capital city status into an argumentative strategy that a strong capital city is in the interest of the whole nation state as illustrated in the discussion about image building (see subchapter 5.2.2). Thus, the locational policies – image building strategy and asking for public funds and compensation payments – are combined by leveraging the capital city status rather than by directly asking for compensation. This strategy worked out insofar as in the revised Swiss Federal Spatial Concept of 2012, Bern placed in the top tier of metropolitan regions albeit with an addendum regarding its function as Switzerland’s political center because Bern does not fulfill the formal requirements to be a metropolitan region such as gateway or corporate functions. It is now referred to the so-called ‘3 + 1 formula’, which indicates that Bern and the wider region was added as an additional metropolitan region albeit with a different function. At the end it seems to be that this positioning strategy was the decisive factor to promote the CRS in to the highest-tier of Swiss metropolitan regions as “The city-region Lucerne would have probably as well been promoted if it

would be the capital city” (Interview Gilgen and Poschet). This suggests that a main function of the CRS is to increase the political leverage of the region vis-à-vis the federal government (Interviews: Gasche, Tobler, Tschäppät).

#### Testing expectation 6

- I. *High local tax autonomy constrains to ask for public funds.*
- II. *No capital city specific constraints constrain to ask for compensation payments.*

The first part of expectation 6 is partly supported. In general, the availability of public funds is limited in Switzerland compared to other political-institutional settings. Nevertheless, Bern tries to tap into public funds by stressing the political importance of Bern for whole Switzerland. This strategy was successful in putting Bern back in the top tier of Swiss metropolitan regions but it remains to be seen whether this capital city based strategy will be successful to tap into federal funds such as the important infrastructure funds.

The second part of expectation 6 is supported. The federal government agreed to set up a working group to negotiate potential compensation payments. When an independent evaluation concluded that Bern and its agglomeration profit from federal presence, the federal government unilaterally terminated the negotiation for a new ‘capital-city legislation’. Thus, given that the City of Bern does not face capital city specific constraints and given that it profit from federal presence, the possibility to ask for compensation payments is constrained.

### 5.3. Explaining locational policies in Bern

In this subchapter, I will first summarize the manifestations of locational policies in order to depict the locational policies agenda of Bern (see Table 19). Flowingly, I will discuss the tested expectations (see Table 20) and try to connect them in order understand the interdependencies of formulating locational policies. In a nutshell, Bern’s discretionary power in formulating locational policies is restricted by the canton. The city takes a rather passive stance on locational policies (especially regarding innovation policies) and focuses on softer locational policies such as putting forward the image as the capital city and increasing the quality of life for its residents.

Table 19: Locational policies agenda of Bern

<b>Locational policies</b>	<b>Manifestations of locational policies</b>
Innovation policies	<ul style="list-style-type: none"> <li>- Support of cluster organizations in medical technology and energy &amp; environmental technology</li> <li>- Few activities regarding start-ups and venture capital</li> <li>- Two promising tripe-helix organizations</li> </ul>
Image building	<ul style="list-style-type: none"> <li>- Positioning Bern as the political center of Switzerland</li> </ul>
Business prerequisites	<ul style="list-style-type: none"> <li>- Central role of the Canton of Bern</li> <li>- Maintaining and increasing quality of life important</li> </ul>
Acquisition	<ul style="list-style-type: none"> <li>- Central role of the Canton of Bern</li> <li>- Three step acquisition strategy in which the City of Bern may engage in the last and least important step</li> </ul>
Coordination	<ul style="list-style-type: none"> <li>- Coordination organizations in the agglomeration Bern and on the regional level</li> <li>- Few coordination of locational policies</li> </ul>
Public funds and compensation payments	<ul style="list-style-type: none"> <li>- No compensation regarding capital city specific costs or loss of income</li> <li>- Reframing of the classical capital city argumentation to tap into federal funds</li> </ul>
Locational policies agenda	<ul style="list-style-type: none"> <li>- Canton of Bern constrains locational policies formulation</li> <li>- Support of cluster in medical technology and energy &amp; environmental technology</li> <li>- Maintaining and increasing quality of life important</li> <li>- Positioning strategy as the capital city important for image building as well as for tapping into federal funds</li> </ul>

The Canton of Bern dominates the formulation of locational policies. Regarding taxes or acquisitions, the canton has the sole discretionary power. In other locational policies like innovation policies or image building the canton and the City of Bern work together. Given these constraints in locational policies formulation ensuing from cantonal influence, the City of Bern focuses on the provision of land and real estate as well as on being attractive for residents by formulating so-called ‘softer’ locational policies that should enhance the quality of life, educational opportunities and cultural activities. Regarding innovation policies, the City of Bern mainly concentrates on cluster policies in the medical technology and energy & environmental technology sectors. These two sectors constitute highly regulated sectors, i.e. typical sectors for capital cities. Neither the Canton of Bern nor the City of Bern tackle start-up promotion or fostering of entrepreneurship. The city is active in two coordination organizations that are both dominated by political actors. The members in both coordination organizations do not intensively engage in locational policies formulation because it seems that too much fiscal revenue is at stake in this policy field. The regional coordination platform CRS is active in putting forward the image of Bern as the political center of Switzerland. Bern links this image building to ask for public funds arguing that a strong capital city is in the interest of the whole nation.

Table 20: Expectation testing Bern

Expectations	Expectation testing	Specifications
E1.1: A weakly developed RIS restricts the formulation of innovation policies.	Not supported	Generally, Bernese economic development agencies take a passive stance on innovation policies
E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Partly supported	Only few promising innovation policies that are explicitly targeting a higher interaction of crucial actors in the RIS
E2: A weakly developed RIS enables the formulation of capital city image building strategy and constrains the formulation of a business town image building strategy	Supported	-
E3: High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.	Not supported	The City of Bern does not have much discretionary power regarding taxes and thus concentrates itself on the provision of land and real estate and the attraction of residents.
E4: A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy.	Not supported	The City of Bern does not have discretionary power regarding acquisition.
E5.1: <i>Agglomeration level:</i> Low institutional fragmentation enables and high local tax autonomy constrains regional coordination what leads to negative coordination. <i>Regional level:</i> High institutional fragmentation and high local tax autonomy constrain regional coordination.	Supported	-
E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported	Coordination only exists among political actors. Private actors are fragmented
E6: <i>I:</i> High local tax autonomy constrains to ask for public funds. <i>II:</i> No capital city specific constraints constrain to ask for compensation payments.	Partly supported Supported	Bern has reframed its argumentative strategy to tap into public funds

Table 20 summarizes the tested expectations in the case of Bern. In the following paragraph, I discuss the expectation stemming from the RIS as an explanatory variable whereas in the next paragraph I discuss the expectations stemming from the MLG setting.

Innovation policies are not restricted by the weakly developed RIS but rather because innovation policies are not a priority of Bern's economic development organizations (E 1.1). However, the few innovation policies – mainly cluster approaches and establishing 'triple helix' organizations– aim at improving the knowledge interactions between actors from the 'triple helix' (E 1.2). The weakly developed RIS constrains an image building campaign based on the economic dynamics. As an alternative, Bern highlights its political importance and it that way differentiates itself from

the Swiss economic powerhouses like Zürich, Geneva or Basle (E2). The strategy was a success, at least in the short-run, as Bern positioned itself back in the top-tier of Swiss metropolitan areas. Bern's limited acquisition activities are not explained by the weakly developed RIS, but by the strong role of the canton regarding tax breaks and the acquisition of firms. Thus, E4 is better explained by the MLG setting, as an explanatory factor, than the RIS.

Similarly to expectation 4, the City of Bern does not have much discretionary power regarding tax reductions for companies and thus concentrates on the provision of land and real estate (E3). However, developable land is rather scarce. As an alternative, the City of Bern concentrates on improving the quality of life. Generally the jurisdictions in the FUA Bern show low enthusiasm in coordinating or even formulating locational policies. It seems that improving the quality of life for their residents is more important for decision makers in the agglomeration of Bern than formulating locational policies that would enhance the international competitiveness of Bern (E5.1). Coordination is also not able to improve the interactions between public and private actors in the local governance regime (E5.2). The local governance regime is dominated by political actors that show little intention to integrate private actors. Yet Bern is active in attracting federal funds by leveraging its capital city status. Thus, decision makers link asking for public funds with image building strategy and coordination on the regional level within the CRS (E6).

#### 5.4. Conclusion

Bern's locational policies agenda is dominated by three main topics. First, cluster policies in the medical technology and energy & environmental technology sectors are formulated as well as a promising 'triple helix' organization in the medical sector was established. These rather rare innovation policies should enhance the knowledge interactions of firms, knowledge institutes, and public actors. Second, Bern concentrates on increasing the quality of life by protecting green spaces, preserving its old town, organizing cultural activities and ensuring educational opportunities. Third, Bern positions itself as the political center of Switzerland and thereby differentiate itself from the Swiss urban powerhouses.

In sum, Bern's city officials take a rather passive stance on economic-orientated locational policies but are active in political locational policies and increasing the quality of life. This finding is supported by van der Heiden (2010, 42–43) who describes that policymakers in the City of Bern orientated themselves primarily towards the national level, while interurban competition on an international level is largely ignored. As a consequence of the weakly developed RIS, Bern avoids to compete on the economic playing field but stresses its political importance and invest in quality of life factors. Thus, economic locational policies oriented towards the sluggish economic dynamics

of the region are largely missing and most locational policies are in a way or another connected to the capital city status or they aim at attracting residents.

## 6. Ottawa

Ottawa features an impressive development from a sub-arctic farming and lumber town to a modern metropolitan region. However, the Canadian capital city has to face a two-dimensional fragmentation: A horizontal one in its FUA between Ottawa in Ontario and Gatineau in Quebec and a vertical one between the ‘town and the crown’. The FUA Ottawa-Gatineau is divided in the very middle by the Ottawa River which marks the political sensitive frontier between Ontario and Quebec. This specific location was one major reason to choose Ottawa as the capital city but it tends to cause a lot of problems in this fragmented FUA. Today, the notion of the capital city legally speaking only applies to Ottawa but the ‘seat of the government’ could be expanded geographically and metaphorically to Gatineau (Paquet 2011, 11–12). The vertical fragmentation refers to the potential conflicting priorities to serve the nation state as a whole as well as its local citizens (Rowat 1968; Rowat 1973). In the context of Ottawa this fragmentation is summarized as “town and crown” (e.g. Gordon 2016).

Table 21 summarizes the case study Ottawa. In general, the locational policies agenda aims at fostering innovation, simultaneously position Ottawa as a government town and business town, developing the local property tax base, as well as attracting public funds. Most of the expectations can explain the formulation of locational policies in Ottawa. Especially low local tax autonomy explains locational policies formulation.

Table 21: Expectations and findings of the case study Ottawa

Nr.	Explanatory factor	Phenomenon to be explained	Expectation	Result
E1	RIS - moderately developed	Innovation policies	A moderately developed RIS enables the formulation of innovation policies.	Not supported
E1.2	RIS - RIS failure(s): Fragmentation, lock-in	Innovation policies	Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported
E2	RIS - moderately developed	Image building	A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported
E3	MLG - Low local tax autonomy	Business prerequisites	Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.	Supported
E4	RIS - moderately developed	Acquisition	A moderately developed RIS enables the adaption of a profound and large-scale acquisition strategy.	Not supported
E5.1	MLG - high institutional fragmentation - low local tax autonomy	Regional coordination	High institutional fragmentation constrains and low local tax autonomy enables regional coordination what leads to negative coordination.	Supported
E5.2	MLG - Capital city specific constraints - low local tax autonomy, - - institutional fragmentation in the FUA	Coordination	Coordination aims at overcoming the constraining parts of the MLG setting.	Partly supported?
E6	MLG - low local tax autonomy - capital city specific constraints	Funds and compensation payments	<i>I:</i> Low local tax autonomy enables to ask for public funds. <i>II:</i> Capital city specific constraints enable to ask for compensation payments.	Supported Supported

The remainder of this case study chapter is structured in four subchapters. The first subchapter gives a general description of Ottawa as well as discusses the manifestations of the explanatory factors. The second subchapter addresses the different locational policies categories and tests the respective expectation(s) one step at a time. The third subchapter links the different locational policies to a locational policies agenda and discusses the results in an integrative manner. The last subchapter concludes the case study.

## 6.1. Profile of Ottawa

### 6.1.1. History

After uniting Upper and Lower Canada to the Province of Canada in 1841, the capital city status moved between the cities of Montreal, Kingston, Quebec City, and Toronto. Since the legislators did not find a consensus regarding the location of the Canadian capital city, the parliament officially asked Queen Victoria in 1857 to select one capital city site. The Queen chose Ottawa as the capital

of the Province of Canada, but “the Canadian legislators rejected this decision in 1858 and then, early in 1859, finally accepted it, but only by a majority of 64 to 59” (Knight 1977, 1).

The choice for Ottawa was reputedly made for political and military reasons but was in its essence a compromise (Andrew 2013, 86–87). For political reasons since Ottawa is located between the primarily French-speaking Canada East and the primarily English-speaking Canada West. Furthermore, there were some legislators who were reluctant to place the capital city in a large commercial center. These legislators thereby referred to the United States’ decision to establish their capital city in Washington D.C. having not even considered New York or Philadelphia (Knight 1977, 11). For military reasons since Ottawa lies several days march away from the US border, but was still connected through the Rideau Canal with Kingston (Tassonyi 2009, 57). However, Egglestone (1961, 102; see also Andrew 2013, 86–87) reviewed the private correspondence between the British Governor General Sir Edmund Head and the Queen in which the Governor General argues that “Ottawa is the only place which will be accepted by the majority of Upper and Lower Canada as a fair compromise. With the expectation of Ottawa, every one of the cities proposed is an object of jealousy to each of the others”.

Ottawa was described as the ‘forest city’ or ‘the city in the woods’ with only about 12’000 inhabitants before the decision to establish the Canadian capital in Ottawa (Andrew and Doloreux 2012, 1293). With the establishment of the Canadian Confederation in 1867, Ottawa became the federal capital (Tassonyi 2009, 57). The forestry industry continued to be the dominant economic base. The government remained a rather small organization (Andrew and Doloreux 2012, 1293). The cities of Toronto and Montreal experienced rapid expansion whereas Ottawa was until the beginning of the 20<sup>th</sup> century still a lumber town (Knight 1977, 15). With the outbreak of the Second World War, the federal bureaucracy started to grow rapidly and became the most important economic driver of the region (Andrew and Doloreux 2014, 1293).

In 1950, the General Report on the Plan for the National Capital by the French urban planner Jaques Gréber suggested physical transformation of Ottawa but as well to changes in the national oversight over the capital city. The option of a federal district was discussed but Gréber favored the establishment of a federal agency which represents the interests of the national state in its capital (Interview Lapointe). In 1959, the National Capital Commission (NCC) had been created based on the National Capital Act. The NCC has planning authority over land owned by the federal government and represents in this way the interests of the federal government in the capital. The NCC possesses a lot of land. In the 1990s, the land possession of the NCC was sold since it was evaluated as not of ‘national significance’ (Interview Lapointe). The land possessions of the NCC, uncoordinated spatial planning of the two cities of Ottawa and Gatineau as well as underlying

aboriginal land claims makes governing the Canadian capital a difficult task (Interviews: Kristmanson, Lapointe, Paquet).

The National Capital Act designated the National Capital Region (NCR) which is an area that spans over the provinces of Ontario and Quebec. This spatial definition of the NCR had consequences for the distribution of the capital city function. Whereas there is limited decentralization of federal institutions outside the NCR (only some museums, regional offices etc. and of course military bases), within the NCR the federal institutions are decentralized (Interview Kristmanson). However, within the NCR the '75/25 initiative' of 1968 located a quarter of all federal jobs and federal investments on the Quebec side of the NCR with the goal to create a bilingual and bicultural capital region. This regional decentralization was motivated by the Quebec separatism threat and the wish to enhance economic development on the Quebec side of the NCR (Tassonyi 2009, 55). Thus, Gilles Paquet (2011, 11–12) concluded that the capital city, legally speaking, only applies to Ottawa but that the 'seat of the government' could be expanded geographically and metaphorically to Gatineau. However, the political economy of Ottawa and Gatineau developed similarly as both transformed from lumber and farming economies in a sub-arctic wilderness into public-sector dominated economies (Taylor 2011, 30–31).

#### 6.1.2. Geography and population

Ottawa is located at the Southern bank of the Ottawa River in the south-east of the Province Ontario. The Ottawa River defines for most of its length the border between the Province of Ontario and Quebec. Thus, Ottawa is directly located at the most symbolically and politically charged border in Canada (Veronis 2013). After the amalgamations in 2001/2002 (see subchapter 6.1.4), the City of Ottawa comprises of a huge territory of approximately 2'796 square kilometers. As a consequence, 80% of the city's territory can be considered as rural (Tassonyi 2009, 56).

Table 22 shows how the population of Canada has constantly grown over the last 35 years. Canada is still a country of immigration. This is especially the case for Canadian cities as they are experiencing population growth. Ottawa is the fourth largest city in Canada and the second city in the Province of Ontario. The population censuses of 2006 and 2011 (Statistics Canada 2016a) show that the City of Ottawa and FUA grow at the same pace as the booming metropolitan area Toronto. Both the City of Ottawa and the City of Gatineau almost grew 10% between 2006 and 2011, but Ottawa is with 883'391 inhabitants 3.3 times bigger than Gatineau with 265'349 inhabitants in 2011.

Table 22: Population of different relevant perimeters

Scale	1980	1990	2000	2010	2015	Change (%) 1980-2015
City of Ottawa	557'829	687'825	786'975	911'985	957'148	+71,58
FUA Ottawa-Gatineau (15 jurisdictions)	-	-	1'110'344 <sup>1</sup>	1'250'553	1'332'001	+19,97 <sup>1</sup>
Province Ontario	8'746'013	10'295'832	11'683'290	13'135'063	13'792'052	+50,18
Canada	24'515'667	27'691'138	30'685'730	34'005'274	35'851'774	+46,24

Source: Statistic Canada (2016a). This population data are estimates based on population censuses. FUA Ottawa-Gatineau equals Metropolitan area code 505. Note: <sup>1</sup>Earliest data from 2001 on FUA level.

Ottawa has a diverse population. Half of the inhabitants of the FUA Ottawa-Gatineau grew up speaking English, almost a third of the populations' mother tongue is French and the rest speaks a non-official Canadian language. 44% of the population in the FUA are fully English-French bilingual (Statistics Canada 2011). This population diversity is linked to the Ontario-Quebec border location but also to immigration. The City of Ottawa has the fourth largest immigration rate following Toronto, Vancouver and Calgary (Andrew and Doloreux 2012, 1297).

### 6.1.3. Regional Innovation System

The RIS in Ottawa can be characterized as being moderately developed because it shows organizational thickness in both subsystems but is fragmented since linkages between actors within and between both subsystems are weakly developed. The regional economy has experienced massive changes over the past decades due to the burst of the dot.com bubble in the early 2000s resulting in a crisis of Ottawa's high-tech sectors as well as due to the financial crisis and the following federal government downsizing. Whereas these crises hit Ottawa hard, its effect may be attenuated, by the rather diversified RIS.

#### Knowledge application and exploitation subsystem

In general, Ottawa's RIS relies on knowledge-based interactions with a strong concentration on KIBS (Doloreux, Freel, and Shearmur 2010). In 2015, 89.49% of all jobs in the FUA Ottawa-Gatineau are associated with the service sector (Warland 2016a). The ratio between KIBS jobs and high- and medium-tech manufacturing jobs is much higher in Ottawa-Gatineau compared to the three biggest Canadian FUAs (see Table 23). While in Ottawa-Gatineau, about 10 KIBS jobs exist for every high-tech manufacturing job, in Toronto the number of KIBS jobs for every high-tech manufacturing job amounts to 2.4 (Statistics Canada 2013). Also the public administration thrives

towards knowledge-intensive activities and these activities predominantly happen in the FUA Ottawa-Gatineau (Warland 2016a).

Table 23: Ratio between KIBS jobs and manufacturing jobs in Canadian cities

Sector	Ottawa	Toronto	Montreal	Vancouver
KIBS	93'271	251'752	426'115	166'795
High-tech industry	9'241	106'032	120'909	30'195
<b>Ratio</b>	<b>10.1</b>	<b>2.4</b>	<b>3.5</b>	<b>5.5</b>

Source: Statistics Canada (2013), data from 2011

Given the knowledge-intensive RIS, Ottawa is attractive for a highly educated workforce. Compared to other Canadian FUAs, the region gathers the second highest proportion of workforce with a post-secondary degree (61.63%), and the highest proportion of master's degree (7.64%) and doctorate degrees (1.67%) (Statistics Canada 2016b). In the City of Ottawa, the public administration accounts for about 101'100 jobs or 19 % of all jobs in 2015 (City of Ottawa 2016a, iv). Following from this federal presence, the region is the national center for defense, security and aerospace with various knowledge-intensive clusters such as cyber security or robotics (Interview Terry). Around 17'000 people are employed by a slightly over than 300 companies in these sectors (Invest Ottawa 2016).

In the late 1990s and early 2000s, Ottawa was for a short time a world-class ICT technology center nicknamed the 'Silicon Valley North' (Andrew and Doloreux 2012, 1292). The Ottawa ICT industry primarily produced telecommunications equipment and software. This ICT cluster displayed a clear clustering of firms in the suburban setting of Kanata in the West of Ottawa (Andrew and Doloreux 2012, 1295). These economic dynamics in the ICT sector were initially a result of federal government decisions to privatize sectors of its communications technology functions (Andrew and Doloreux 2012, 1295). The bursting of the dot.com bubble in 2001 hit the region dramatically. The following demise of Northel Networks that once accounted for half of the private sector R&D in whole country (Taylor 2011, 32) impaired the whole RIS deeply. This crisis marked the sharp end of the short economic rise of Ottawa and made the federal sector the region's largest employer (Andrew and Doloreux 2014, 142). However, the ICT sector seems to slowly recover. The number of ICT jobs has been increasing again since 2009 reaching a total of 68,300 workers in this sector in 2014, which comes close to the maximum of 72,700 in 2000 (Ottawa Business Journal 2014). Moreover, Warland (Warland 2016c) describes how the Ottawa based companies are mostly part of multi-branch, internationally competing firms what ensures the global connectivity of the ICT cluster.

In addition to the recovering high-tech sector in Kanata, a cluster of firms active in web 2.0 software products gather around downtown Ottawa. A bit exaggerated, Ottawa features two high-tech business communities. On the one hand, firms originating or closely linked to the old telecom industry located in Kanata (Interviews: Lazenby, Variano). On the other hand, younger entrepreneurs develop web 2.0 software products and they gather in the inner city. The latter are active in diverse sectors and more prone to attract the attention of international venture capitalists (Interviews: Saric, Variano). Although both develop ICT products, the linkages between these clusters are weak (Interviews: Ritonja; Variano). Despite ICT and software development, the two other rather big industry clusters are aerospace and security & defense (Interview Terry).

### Knowledge generation and diffusion subsystem

Doloreux (2004) characterizes the knowledge generation and diffusion system as organizationally thick. Two universities (University of Ottawa, Carleton University) and two colleges enroll around 100'000 students (Interview Dale). Universities are assessed as crucial, not just for talent development but also for generating innovation (Interview Ritonja). Federally funded research organizations such as the National Research Council of Canada, the Defence Research Development Canada and the Communications Research Centre Canada operate most of the 44 federal research laboratories in Ottawa (Warland 2016a, 10). Yet, these federal research laboratories display only weak links to actors in the knowledge application and exploitation subsystem (Interviews: Faris, Ritonja, Cameron-Nunes and Temsamani). National industry associations are present and firms assess them as important to stimulate the knowledge interactions in the region (Warland 2016a). However, Warland (2016c) finds that the knowledge generation and diffusion subsystem plays only a minor role in diversification from public procurement to services and products for private clients.

### RIS development

The RIS in Ottawa shows organizational thickness in both subsystems. However, the actors and organizations within the RIS are fourfold fragmented: Firstly, there is a fragmentation between the industries that are related to the federal presence and the export orientated industries that operate in the high-tech sector. The only hybrid seems to be the defense sectors. (Interview Dale) Secondly, the old telecom industry in Kanata and the young entrepreneurs located Downtown do not display much interaction (Interviews: Saric, Sudds, Variano). Thirdly, the business communities in Ottawa and in Gatineau are fragmented despite being functionally connected. The vertical institutional fragmentation, i.e. being located in different provinces, hinders interaction not just between public actors but also with the business communities. And finally, the linkages to federal research labs are weak and thus the presence of federal research labs is not exploited (Interviews: Faris, Ritonja,

Cameron-Nunes and Tamsamani). The RIS in Ottawa is not fully dependent on the federal presence. The high-tech sectors, although stemming from governmental privatization, developed into a distinct and autonomous cluster.

#### 6.1.4. Multilevel governance setting

Ottawa is constrained on the public vertical and the public horizontal MLG dimensions. The federal government exerts direct control over its land and thus the local autonomy of Ottawa is constrained to a greater degree than in other Canadian municipalities. Furthermore, Canadian municipalities do not enjoy a high local tax autonomy. On the horizontal dimension, the FUA Ottawa is vertically institutional fragmented at its very heart. On the local governance dimension, developers are the important business agents in the formulation of locational policies.

#### Public vertical dimension

Municipalities are not recognized in the Constitution of Canada. Reference to municipalities is only made as ‘creatures of the provinces’ (Tassonyi 2009, 60). Thus, Canadian municipalities have long been seen as policy-takers, not policy makers (Horak 2012, 350). When people refer to MLG in Canada, they often mean only the federal-provincial interplay (Interview Champagne). However, Horak and Young (2012) found practices of multilevel governance in Canadian cities that are similar to the ‘type II multi-level governance’ (Hooghe and Marks 2003) which means fluid, problem-driven, task-specific interaction among a varying set of governmental and non-governmental actors. Bradford and Wolfe (2013, 1) assess the policy field of (regional) economic development in Canada as densely populated of a wide range of intertwined actors.

Given the absence of municipalities in the Canadian constitution, the City of Ottawa operates under the statutory framework of the Province of Ontario. The Municipal Act, 2001 of the Province of Ontario gives municipalities more autonomy than its predecessor acts. In many policy spheres municipalities have been given ‘natural person powers’ i.e. the rights and powers to conduct their administrative and organizational affairs on a day to day basis without specific legislative authority (Tassonyi 2009, 61). This is in line with a general trend in Canada that provinces equip municipalities with more governing autonomy not at least because provinces have started to see urban areas as pivotal places of economic development (Horak 2012, 350–51).

However, the local autonomy of Ottawa is constrained in comparison to other Canadian municipalities because the NCC exerts direct control over land that is owned by the federal government with respect to planning, zoning and building. “This means that neither the provincial

nor the local authority has any rights of taxation, legislation, or regulation over such property, except what the national authority chooses to give it” (Taylor 2011, 28). The NCC has even the right to acquire property, with compensation, when the land is evaluated as being of ‘national significance’ (Taylor 2011, 28). As the single-largest property-owner in the NCR with direct control over approximately 10 percent of all land in Ottawa, including some very prominent spots, the NCC is an important player in the MLG setting of Ottawa (Champagne 2011, 46; Interviews: Kristmansson, Lapointe, Paquet). Normally, the NCC complies with municipal official plans, but the agency is not required to do so (Tassonyi 2009, 62). This strong position of the NCC puts the city hall in an ambivalent position. On the one hand, the NCC constrains the local autonomy of Ottawa (Interview Paquet) which makes city hall feel like its being dictated by the federal government in some instances (Andrew and Doloreux 2014). On the other hand, city hall depends on federal expenditures to sustain its budget (Andrew and Chiasson 2012).

Provinces play an important role in the Canadian MLG system. They enjoy high tax power as they raise the highest share of taxes (39.68 %) of all sub-national entities in OECD countries. Local governments, on the other hand, have restricted tax autonomy as they are raising 9.69 % of all Canadian taxes. The local tax bases are constrained as Canadian municipalities are only allowed to collect property taxes. The other two major revenue categories are user charges and transfers from higher-tier governmental levels (mostly from the provincial government) (Siegel 2009, 50–51). Property taxes are levied on taxable properties on an annual basis. User fees are paid for example for water supply, sewage treatment, and transit services. Regarding the governmental money transfers, it can be distinguished between four categories: (1) conditional grants, (2) unconditional grants, (3) payments in lieu of taxes (PILTs), and (4) revenue sharing which is sometimes part of the unconditional grants category (Tindal and Nobes Tindal 2009, 213). PILTs compensate municipalities for a loss of parts of the property tax bases given that federal and provincial premises and diplomatic properties are tax exempted.

Table 24 summarizes the revenue of the City of Ottawa. The property taxes are extremely important for Ottawa as they make up 47% of the revenue. User fees account for another 24% of the revenue and together with 4% miscellaneous budgetary items,<sup>30</sup> the City of Ottawa raises 75% of the budget independently. Governmental grants (19%) and payments in lieu of taxes (6%) add up to 25 % of revenue stemming from higher-tier governments. Especially governmental transfers from the Province of Ontario are important for the local budget in Ottawa.

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<sup>30</sup> Under miscellaneous revenue are own funds, fines, investment income, development charges and other income summarized.

Table 24: Local revenue composition City of Ottawa

Budgetary items	CAD in Millions	%
Property tax	1'455.26	47.08
Fees and services	735.78	23.8
Federal transfers	499.81	16.17
Provincial transfers	79.56	2.57
Payments in lieu of taxes	191.88	6.21
Miscellaneous	128.98	4.17
Total	3091.27	100

Source: City of Ottawa (2016b), data from 2015.

Thus, the local tax autonomy of Ottawa is constrained regarding tax bases, i.e. no local taxes on personal and corporate income, but not so much constrained on the amount of money stemming from independently raised revenue. Thus property taxes are extremely important for Ottawa. Nevertheless higher-tier governmental transfers account for a quarter of the revenue. Some conditional grants come with strings attached, i.e. strong conditionalities of how to use this public money. An expert explains the consequences of these conditionalities:

“It starts on the federal level. The federal level is an enormous redistribution apparatus. The federal level does not provide a lot of services. Only 18% of the federal budget goes into operations. Approximately 80% is for transfer payments. The provinces are delivering a lot of services. So the federal level can use that money to attach some strings or create incentives. The federal level has the spending power. This is a steering mechanism. The municipality are big receivers of federal and provincial transfers (...) Also the provinces steer the municipalities with a variety of fiscal instruments” (Interview Champagne)

## Public horizontal dimension

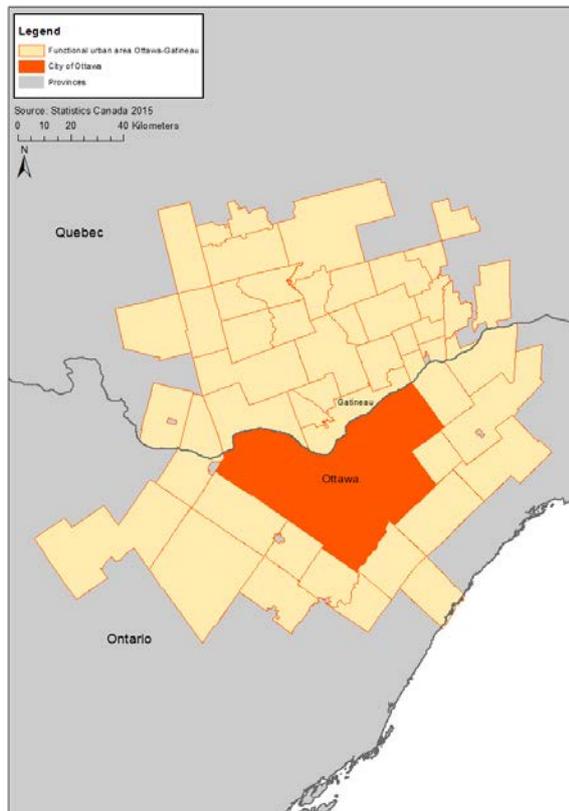


Figure 6: Map of FUA Ottawa-Gatineau

Cartography: Mario Huber

The two most important characteristics on the public horizontal dimension are the amalgamation in 2001 that drastically enlarged the territory of Ottawa and the provincial border that cuts the FUA through the very middle. Between 1996 and 2006 the Conservative Party of Ontario pursued a municipal consolidation strategy. The number of local governments was almost reduced to half, from 850 to 445 (Siegel 2009, 28). The regional municipalities of Ottawa and Carleton amalgamated in 2001. This was a merger of two upper-tier local governments (regional municipalities) and eleven lower-tier local governments (municipalities).<sup>31</sup> In 2002, an amalgamation of five municipalities formed the today City of Gatineau.<sup>32</sup> After the amalgamation, the City of Ottawa now consisted of a small urban core and huge rural territories

(around 80 % of city territory) (Tassonyi 2009, 56).

The amalgamation constructed a City of Ottawa with more power and autonomy and was thus able to improve coherent policy implementation in different areas, among others as well economic development (Siegel 2009, 30). On the other side of the Ottawa River, the City of Gatineau also gained size so that the FUA Ottawa-Gatineau is dominated by two cities that belong to different provinces. This is an extreme case of vertical institutional fragmentation (Kaufmann and Sager 2018). In other words, Ottawa and Gatineau overcame challenges of institutional fragmentation within their province but the FUA is fragmented across two provinces (Chattopadhyay 2011, iv).

## Local governance dimension

In a comparative study of Canadian cities, Horak (2012, 356) points to the importance of business agents in the local governance dimension, especially to large employers and property developers

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<sup>31</sup> The eleven municipalities were Cumberland, Gloucester, Goulbourn, Kanata, Nepean, Osgoode, Ottawa, Rideau, Rockcliffe Park, Vanier, and West Carleton.

<sup>32</sup> The five municipalities were Aylmer, Buckingham, Gatineau, Hull and Masson-Angers.

who were deemed influential. The influence of business interests can be found in policy fields such as image building (Harvey and Young 2012) or re-developments of brown field's (Ircha and Young 2013, 168)(Ircha and Young 2013, 168). Martin Horak theorizes these business influences by linking them to the social production model of the urban regime theory: "The most obvious reasons for such business influence is that business agents have significant material resources and often relevant knowledge and expertise. (...) [T]he concentration of resources that business elites possess places them in a position to strongly influence governance processes, if they so desire" (Horak 2012, 356–57).

Furthermore, Horak (2012, 357) highlights the importance of the chambers of commerce as the uniting organization for local business actors in Canadian cities. According to my interview partners, the chambers of commerce do not exercise much influence in Ottawa out of two reasons: First, four different chambers of commerce are active in Ottawa that are historically more competitors than partners (Interview Sudds). And secondly, Ottawa does not feature a strong industry anymore which accounts for the lack of money and power of the chambers of commerce. As a consequence "(...) here in Ottawa no urban regime exists, except for the developers" (Interview Paquet). Another expert is similarly trenchant in describing the role of the developers in Ottawa: "Developers are the only people that have an influence on city hall. It is not the chamber of commerce or other organized business interests" (Interview Light).

Developers are not politically organized because they do not want to be recognized as important players and they are often direct competitors (Interviews: Bird, Normand, Paquet). However, developers are able to form ad-hoc coalitions when pushing for certain issues (Interview Bird). An expert describes the role of developers: "Local developers in Ottawa are very important in running the city. There are about 50 influential developers that have something to say. They do not want to be organized because than will be recognized as a political player. It is a diffuse form of power" (Interview Paquet). As a consequence, the influence of developers on city hall is informal by ensuring good relations to people in the administration and the city council (Interviews: Bird, Light). An economic development officer highlights the importance of developers "because they get things done" (Interview Sudds). Especially if companies are in need of infrastructure or if side locators are interested in brining companies to Ottawa, direct links to developers are important (Interview Sudds).

Generally, the city hall and its arm-length agencies take an active role in formulating and implementing locational policies. Yet these organizations reach out to local business leaders, local business interest groups and to individual firms (Interviews: Bashir, Lazenby, Ritonja). Both of the latest economic development plans have been formulated within an extensive consultation process

with the major stakeholders concerned with economic development in Ottawa (Interviews: Bashir, Ritonja, Sudds). Another example is that representatives from local businesses and local knowledge institutes sit on the board of Invest Ottawa. Thus, it is relatively easy for business actors to get access to the locational policies formulation process despite the comparatively weak influence of the chambers of commerce.

## 6.2. Locational policies in Ottawa

Economic development plans and the organizational structure to implement these locational policies changed several times in Ottawa. In the early 1980s the economic development agency OCRI (Ottawa Centre for Research and Innovation) was created as a public-private partnership between the high-tech sector, federal laboratories, and post-secondary institutions (Andrew and Doloreux 2014, 146–47). OCRI was primarily a member based organization with support from the city and the region (Interview Dale). OCRI formed itself around the then booming telecom service sector but it enlarged its economic sector profile to incorporate the ICT, the health, and the defense sectors (Interview Dale). Andrew and Doloreux (2012, 1295–96) described a gradual development of OCRI towards becoming a “knowledge broker and a knowledge translator, interested in promoting high-tech development with strong connections to the post-secondary and post-doctoral level, but also in building the base by developing the capacity of the elementary and secondary education system to meet the challenges of the knowledge-based society”.

OCRI initiated the establishment of The Ottawa Partnership (TOP) in 1999. TOP served as a meta governance structure to coordinate the activities of the city hall, the high-tech sector, the life sciences sector, the tourism sector, and of the big universities in Ottawa, namely Carleton University and University of Ottawa (Andrew and Doloreux 2014, 147). The troubles of the high-tech sectors and the amalgamation in 2001 preoccupied local decision makers with other tasks than the coordination of locational policies what led to a gradual inactivity of TOP (Andrew and Doloreux 2012, 1296).

After the turn of the millennium, the City of Ottawa initiated on its behalf the Ottawa 20/20 initiative, a participatory planning process with the aim to create sustainable development. This initiative produced five plans (so-called growth management plans) each with a thematic focus and formulated policy directions. The Economic Strategy was one of these five growth management plans.<sup>33</sup> The whole Ottawa 20/20 process enjoyed wide engagement, but the economic downturn

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<sup>33</sup> The other four growth management plans were the Official Plan, the Human Services Plan, the Arts and Heritage Plan and the Environmental Strategy.

of the high-tech sector and more conservative political ideas on the provincial level that led to a decline of interest in this collaborative planning initiative (Andrew and Doloreux 2014, 144).

In 2009, the City of Ottawa launched a five year economic development plan called Partnership for Prosperity. The economic development plan 'Partnerships for Innovation: Economic Development Strategy Update 2015-2018' continues direction of its predecessor plan. Both latest economic development plans have been formulated within an extensive consultation process with major stakeholders that engage in economic development in Ottawa (Interviews: Bashir, Ritonja, Sudds).

The substantive focus of these economic development plans are compared in Table 25. Each of these plans feature four key aspects. This comparison reveals that the locational policies underwent significant changes. The 20/20 process was focused on the development of knowledge institutions, clusters, fostering start-ups and on image building. The latter Partnership for Prosperity agenda concentrated on governance questions, a holistic model of economic development including a focus on the knowledge economy and image building. The current economic development plan focuses on fostering entrepreneurship, attracting tourists, gathering of data and information for strategic decisions and acquisition and retention of investment and companies. All economic development plans contain some elements of image building strategies. Regarding innovation policies, the focus changed from classical cluster approaches, to a more general development of the knowledge economy to a fostering of start-ups and entrepreneurship via incubators and accelerators. In a nutshell, Ottawa formulated locational policies since the turn of the millennium with the aim to become an innovative business city as well as to promote the image of Ottawa as an attractive place for business as well as for tourists.

Table 25: Comparison of economic development plans in Ottawa

<b>Economic Strategy</b> (20/20 process) (2001-2020)	<b>Partnership for Prosperity</b> (2009-2015)	<b>The Partnerships for Innovation</b> (2015-2018)
Development of knowledge institutions and professional training	Strengthening the knowledge economy	-
Cluster development and improvement of knowledge transfer and learning within Ottawa’s cluster	-	-
Supporting start-ups and entrepreneurs	-	Fostering an entrepreneurship ecosystem
Image building of Ottawa as a place for business and investment	International branding of the city	Development of tourism and hosting events
-	Balancing business prosperity with social, environmental and cultural goals	-
-	More proactive leadership of the city in economic development	Research and information tools on economic development to make informed strategic decisions
-	-	Investment attraction and business expansion and retention
Source(s): City of Ottawa (2003) and Andrew and Doloreux (2012, 1292–93)	Source(s): City of Ottawa (2011)	Source(s): City of Ottawa (2015)

The two newest economic development plans explicitly position the city hall as the coordinating and central actor in a collaborative locational policies decision-making process. The Partnerships for Prosperity agenda sketched out an economic development governance model in which the city hall would coordinate the activities of three different partnerships that would act as arms-length agencies.<sup>34</sup> This exact locational policies governance model was not implemented, but it led to the establishment of the current economic development agency Invest Ottawa that superseded OCRI and it led to a strengthening of Ottawa Tourism.

Invest Ottawa is the central economic development agency and as such important in the formulation and implementation of various locational policies. The City Hall steers Invest Ottawa with multi-year agreements and annual operating plans. Invest Ottawa is completely funded by public money from all levels of government, but the aim is to attract as well private money in future

<sup>34</sup> The following three partnerships would govern locational policies in Ottawa according to the Partnerships for Prosperity agenda. First, Innovation Ottawa would manage the economic clusters. Second, Destination Ottawa would be active in image building, touristic attraction and cultural events. And third, Quality Ottawa would represent a wide spectrum of business organizations as well as community, environmental and cultural organizations (City of Ottawa 2009: 11-14).

(Interview Lazenby). Invest Ottawa bases on seven vertical pillars, i.e. seven different economic sectors (see section 6.2.1), that are cut through by two vertical dimensions, i.e. the local BIAs and the activities in foreign markets mainly in China and Brazil (Interview Lazenby).

The locational policies of Invest Ottawa should lead to job creation. An interview partner states that “the overall goal of Invest Ottawa’s activities is to contribute to the creation of jobs” (Interview Lazenby). For sure, job creation has multiple positive impacts for the local economy. However, it seems that the focus on job creation can be explained by the impossibility to tax personal and corporate income as well the provincial-municipal co-funding of social assistance (Interviews: Bashir, La Flamme). The Province of Ontario obliges its municipalities to contribute to social assistance expenditures which constitutes a significant budgetary item. “One of the major complaints of municipalities is not just the magnitude of these expenditures but their volatility (...) Everyone involved in the system (even provincial public servants in private conversations) recognizes that this a problem and that social-assistance expenditure needs to be moved to the provincial level” (Siegel 2009, 57). In 2010, Ontarian municipalities payed about 19.4 % of the total cost of social assistance and 50 % of administrative costs. The municipal share of these costs should gradually phase out until 2018 and the share of administration costs is currently being renegotiated (Ontario Ministry of Community and Social Services 2012).

#### 6.2.1. Innovation policies

Invest Ottawa does not apply a mainstream cluster approach but it follows a sectorial approach. The targeted sectors are technology-intensive and knowledge-intensive because they are most likely to generate jobs. Ottawa features a vibrant start-up scene that is supported by incubators and specialized training courses for entrepreneurs. Public funds try to compensate for the lack of venture capital. Innovation policies furthermore aim to create better linkages between the well-developed knowledge infrastructure and other relevant actors in the local economy.

#### Cluster policies

During the 2000s, OCRI pursued a cluster approach to develop the health, defense and ICT sectors (Interview Dale). Today, Invest Ottawa concentrates on seven knowledge-intensive and technology-intensive industries: aerospace, security & defense, clean-tech, digital media, film & TV, communication technologies, software, and life sciences. The focus on film & TV is also motivated by its ability to promote and brand the city nationally and international (City of Ottawa 2015, 26). Invest Ottawa interprets its role in these key industries as “connecting the dots. We facilitate and coordinate. For example, we are doing match-making and bring local firms together. When

someone searches for a specific service, we provide them with lists of companies in Ottawa (...) A database helps establishing this match-making” (Interview Terry). Invest Ottawa especially helps smaller companies in the supply chain by linking them to bigger companies and to the large system integrators (Interview Terry).

### Start-up promotion

Ottawa features a vibrant start-up scene but mostly regarding software innovation that is largely detached from the capital city economy (Interview Variano). A few incubators and accelerators operate in Ottawa. Invest Ottawa manages its own incubator. A new incubator opened in fall 2016 called Innovation Center at Bayview Yard operated by Invest Ottawa (Interview Bashir). Invest Ottawa offers an intensive 120 training program for entrepreneurs under the name GrindSpace XL. Furthermore, the local universities offer mentorship programs for spin-offs that stem from their research activities (Interview Variano).

Generally, Canada does not feature the same venture capital intensity as the US. One interviewee estimated that Canada lags about 10 years behind the US because the US has more successful exits which increases the amount of venture capital (Interview Fielding). In 2015, only two venture capital firms were located in Ottawa. However, venture capital is assessed as being available but mostly for products and innovations in the ICT sector (Interview Variano). And of course, a lot of entrepreneurs glance around in other Canadian cities or the US for venture capital (Interview Variano). Some public funds have been established to compensate for the lack of venture capital (Interviews: Dale, Faris, Variano). However, public venture capital is assessed as rather slow and attached to a lot of requirements. Private venture capital, on the other hand, is characterized as faster and its requirements are mostly limited to the idea and its commercialization (Interview Variano).

### Knowledge infrastructure

The knowledge infrastructure is well developed in Ottawa. Universities and the federal labs are seen as crucial in generating innovations (Interview Ritonja). Especially the Carleton University which has a strong research focus in the fields of software engineering, network security and pervasive computing (Warland 2016a; Warland 2016c). Clear strategies to exploit the potential of the federal research labs are missing. The linkages between the local firms and the federal research lab are assessed as poor what constrains the commercialization of technology from these federal labs (Interviews: Faris, Ritonja, Cameron-Nunes and Temsamani).

### Testing expectation 1.1

*E 1.1: A moderately developed RIS enables the formulation of innovation policies..*

Expectation 1.1 is not supported. The direction of causality seems rather reversed. The newest economic development plan explicitly focuses on innovation. The formulated innovation policies seem to mainly target innovation and the fragmentation of the RIS and the business community. Thus, innovation policies in Ottawa are not constrained or enabled by the RIS but aim at the very weaknesses of the RIS. The discussion of expectation 1.2 develops this insight further.

### Testing expectation 1.2

*E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.*

Expectation 1.2 is supported. Innovation policies especially aim at the fragmentation of the RIS subsystems and the fragmented business communities. Furthermore, innovation policies try to create a fruitful environment for start-ups.

Innovation policies in Ottawa mainly try to improve the linkages between the relevant actors in the RIS. The city hall and Invest Ottawa act like brokers. The main goal of Ottawa's innovation policies is to improve the linkages between the key actors in Ottawa's RIS such as the different business communities, business interest organizations, the research institutions and the universities. These linkages are currently not exploited to the full potential (Interviews: Lazenby, Ritonja). Regarding the fragmented ICT business communities in Kanata and Downtown, Invest Ottawa established first contacts between key persons of the different entrepreneurial communities (Interviews: Bashir, Rionja). The goal is "to break down the barriers and establish first linkages" (Interview Ritonja).

Regarding the weaknesses of the start-up scene, Invest Ottawa offers specific courses for new entrepreneurs to address legal, financial and strategic issues of start-up firms. Furthermore Invest Ottawa links entrepreneurs with venture capital firms. The new Innovation Center at Bayview Yards is likely to significantly improve the entrepreneurial system in Ottawa and should as well "bring industries together and serve as a melting pot" (Interview Bashir). However, I did not detect any strategy to establish better linkages to the federal research labs although this is pointed out as a distinctive weakness (Interviews: Faris, Temsamani).

### 6.2.2. Image building

Jean Harvey (2012) detects increasing image building activities of Canadian local governments aiming at attracting tourists, investors and new residents. Ottawa features a relatively long history of branding exercises, where most of them had the aim to overcome the image of a government town (see Andrew and Doloreux 2012). The turn of the millennium marked the “zenith moment of Ottawa no longer being perceived as a government town” (Andrew and Doloreux 2012, 1296). The tagline Silicon Valley of the North was used to describe the innovation dynamics in Ottawa (Interviews: Lazenby, Saric; Shavinina 2004; Spigel 2011). In 2001 the branding slogan ‘technically beautiful’ was proposed, “supposedly linking nature with high-tech; received with a mixture of amusement and dismay, it was rapidly discarded” (Andrew and Doloreux 2012, 1296). The fact that the City of Ottawa had felt patronized by the federal government and that local elites reflects the value of the private sector seem to explain the triumphant tone which proclaimed the end of Ottawa as a government town (Andrew and Doloreux 2012, 1295). The crash of the high-tech sector obsoleted these branding exercises.

Currently, Ottawa is trying to position itself as a “G7 capital and high-tech town. We are fully playing this card. We are not using ‘either or’” (Interview Lazenby). According to city officials, it took some time to understand that Ottawa will always be associated with its capital city function. The new emphasis on innovation – both in government and in the private sector – should be reflected in the image of Ottawa (Interview Bashir). Besides innovation, Ottawa is making use of the 150 anniversary of the Canadian Confederation to showcase itself on the national stage. Ottawa, as the capital city, should be “the epicenter of this 2017 anniversary (...). With our activities, we want to change the perception that people have about Ottawa. We want to change the image of a being a conservative government town. We want to demonstrate the level of vibrancy and creativity the industries in Ottawa can offer” (Interview La Flamme). In a similar vein, the neighboring City of Gatineau also tries to position itself as a business city (*Ville d'affair*) because of the perception that Gatineau is only a city for and by public servants (Interview Temsamani).

### Testing expectation 2

*E. 2: A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.*

Expectation 2 is supported. The development of the RIS and its most vibrant economic sectors are crucial in the image building endeavors of Ottawa. The underlying assumptions of expectation 2 are well traceable over time in the case of Ottawa because of the massive ups and downs of its economy. Before the crash in 2001, Ottawa was able to build an image around its vibrant high-tech

sector to the extreme that Ottawa was branded as ‘the Silicon Valley of the North’ and that local elites rejoiced that the end of government town has come. After the crisis of the high-tech sector, Ottawa struggled for a long time with building an image because it wanted to copy the business town image of the 1990s and early 2000s (Interview Bashir). The officials of Ottawa formulated a twofold image building strategy around the capital city status and its economic sectors.

### 6.2.3. Business prerequisites

The local tax autonomy is constrained in Canada as local governments are only allowed to collect property taxes. Hence, the policy instruments at hand in the business prerequisites category are limited. Thus, the City of Ottawa focus on the provision of land and real estate; and it does this extensively.

Property taxes are extremely important for the City of Ottawa as they constitute almost half of the annual revenue (see subchapter 6.1.4). The amount of property tax is based on the value of the property determined by Municipal Property Assessment Corporation, a non-profit corporation created by the Province of Ontario. The Value of the property is multiplied by the municipal tax rate which is determined by the City Council. The City of Ottawa knows 13 property classes such as residential, office building, commercial, multi-residential, farmland and so on. The tax rate may differ for each property class. For example, the residential property tax rate was 0.5 % in 2015. The tax rate for office buildings was 1.16% and the tax rate for commercial use of property was 0.96%. A representative of a business interest group criticizes the high tax rates for commercial and business properties in Ottawa compared to the residential property tax rate (Interview Sudds).

The City of Ottawa pursues an active strategy regarding the provision and development of land and real estate. The city is especially busy trying to ensure low commercial vacancy rates Downtown because of its high property value and the federal intention to consolidate federal office space outside the Downtown core (City of Ottawa 2015, 31). The city hall expects that 10’000 federal jobs will move out of Downtown Ottawa in the next five years. Real estate vacancies and a consequential decrease of property value should be countered with three strategies. Firstly, side locators are informed and possible collaborations are established. These collaborations are part of a general initiative called ‘Site Selector Engagement Program’ to handle real estate vacancies and to acquire companies to Ottawa (City of Ottawa 2015, 30–31). Thus, this initiative is also part of the acquisition locational policies category (see subchapter 6.2.4). Secondly, financial incentives in the form of tax reductions are provided if property owners renovate their real estate in Downtown. And finally, real estate renovations in Downtown are automatically eligible for the ‘Capital

Investment Track'. This track is a fast-track procedure for all aspects of municipal approvals and requirements that are evaluated as a priority for the economic development of Ottawa (Interview Bashir).

### Testing expectation 3

*E3: Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.*

Expectation 3 is supported. The City of Ottawa is very active in the provision and development of land and real estate. This may be explained by the factors. On the one hand, the range of local taxes is constrained for the City of Ottawa and, on the other hand, the allowed local tax, i.e. property tax, makes up half of the annual of the City of Ottawa. Thus it makes sense to develop the tax base of this important local tax. Thus, the endeavors to fill the vacant real estate Downtown can be interpreted as measures to maintain the value of their most valuable real estate assets. The City of Ottawa states that rising commercial vacancy rates can result in decreasing city revenues (City of Ottawa 2015, 31). An expert confirms the causal link between local property taxes and the huge efforts of Canadian cities to increase the value of land and real estate (Interview Champagne). This huge efforts to develop land and real estate may be explained by its direct economic implications. The development of land and real estate enlarges the local property tax base and has thus a direct impact on the city budget whereas most other locational policies are not as tangible with only indirect implications.

#### 6.2.4. Acquisition

Invest Ottawa is the entity responsible for acquiring firms. Its acquisition strategy bases on three pillars: Firstly, Ottawa is praised as a 'soft-landing' spot to tap into the North American market. Canada signed the Free Trade Agreement with the US. For example, Invest Ottawa operates a small incubator for Chinese firms to start their activities in North America. China has been specifically selected as a partner because the Beijing municipality and the City of Ottawa signed a cooperation agreement that is, among others, concerned with strengthening the mutual business relations (City of Ottawa 2015, 29). Another example which is interesting for my research is the cooperation with The Hague in issues regarding the cyber security sector. Invest Ottawa uses such international business relations two-dimensionally as they help as well Ottawa-based firms to tap into overseas markets (Interview Lazenby). Secondly, the key industries are promoted as an argument to relocate to Ottawa. Invest Ottawa especially targets firms that engage in R&D intense activities. Invest Ottawa helps firms to get access to competitive governmental funding schemes

(Interview Lazenby) such as tax reductions based on a firm's R&D intensity (Interview Terry). Finally, the high share of well-educated workforce is promoted as an opportunity to access a large talent pool. Invest Ottawa not only targets firms, but it tries to attract talent by promoting itself as a city with high quality living conditions (Interviews: Dale, Lazenby, Ritonja, Terry).

Besides these specific acquisition strategies, Invest Ottawa also pursues mainstream acquisition approaches such as welcoming trade delegations, going to trade missions and visiting exhibitions or the aforementioned collaborations with side locators. In some instances the Province of Ontario attracts a company, and in a second step, the different Ontarian municipalities compete to attract the company into their jurisdiction (Interview Bashir). If a firm decides to relocate to Ottawa, Invest Ottawa offers to accompany the firm through the whole set-up process.

#### Testing expectation 4

*E4: A moderately developed RIS enables the adaption of a profound and large-scale acquisition strategy.*

Expectation 4 is not supported. Invest Ottawa is very active in acquiring firms based on other advantages than its RIS. Only one out of three pillars of Ottawa's acquisition strategy is based on the local economic sectors. The two additional pillars highlight other local assets such as its location in North America and its large talent pool. As an example, the utilization of the Beijing-Ottawa partnerships as an acquisition tool shows that Ottawa searches for ways to be attractive beyond its RIS. Thus, Ottawa compensates its not fully developed RIS with other local assets.

#### 6.2.5. Coordination

Ottawa is vertically institutionally fragmented. This provincial border at the very heart of the FUA seems to be a too big obstacle for regional coordination. A business man described this fragmentation metaphorically: "The Ottawa river is wider politically than it is physically (Interview Bird). Ottawa was chosen as the capital city to bridge the Anglophone and the Francophone Canada, but it cannot live up to this task (Interview Lapointe). It goes as far as "people are talking about Ottawa and Gatineau as the two solitudes" (Interview La Flamme).

I did not find any coordinated locational policies between Ottawa and Gatineau. The economic development agencies at both sides of the river – Invest Ottawa and Développement économique CLD Gatineau – are not coordinating their efforts (Interviews: Lazenby, Temsamani). Business interest organizations like the different Chambers of Commerce only talk to each other without any coordination commitment or do not cooperate at all as it is the case for the Business

Improvement Districts (Interviews: Faris, Normand, Sudds). A public servant stated that “the lack of coordination is holding Ottawa and Gatineau back” (Interview Bashir). Neither the establishment of federal offices and institutions in Gatineau nor the amalgamations in the early 2000s have encouraged coordination between Ottawa and Gatineau (Interviews: Chattopadhyay, Lapointe). However, the current mayors have begun to meet periodically which has been facilitated by the NCC (Interviews: Faris, Kristmanson, Lapointe).

A vivid example of the inability to coordinate relevant policies is the public transport system that is loosely connected between Ottawa and Gatineau and in general rather poorly developed. To change this public transport dilemma, the City of Ottawa pushed forward its very own transportation plan without the integration of Gatineau. (Interview Lapointe). As a consequence, the public transportation system is segregated in the middle of the metropolitan region where about 60’000 people are commuting every day to the other side of the Ottawa River (Champagne 2011). Thus, the public transportation system is not meeting the needs of the growing population and can be seen as a coordination failure.

#### Testing expectation 5.1

*E5.1: High institutional fragmentation constrains and low local tax autonomy enables regional coordination what leads to negative coordination.*

Expectation 5.1 is partly supported. The interviews reveal that it is mainly the vertical institutional fragmentation that constrains horizontal coordination. Vertical institutional fragmentation trumps the favorable low tax autonomy in explaining regional coordination. Local tax autonomy does not enable constraints but it constrains beggar-my-neighbor behavior and harmful regional competition. There is also no coordination on the Ontarian side of the FUA Ottawa-Gatineau. In this Ontarian case, coordination in economic development makes no much sense because of the urban-rural divide.

The vertical institutional fragmentation in the FUA Ottawa-Gatineau brings along different political systems and issues of Quebec’s status within Canada. In General, Quebec has a more centralized political system whereas the municipalities in Ontario enjoy more autonomy (Interviews: Kristmanson, Lapointe). Ottawa and Gatineau cannot cooperate in activities that would involve spending taxpayers’ dollars from one jurisdiction that would benefit the other jurisdiction. Consequentially, it is difficult to create a strategic alliance over provincial borders (Interview Lazenby). Furthermore, there are different languages and law systems – common law in Ontario and the civil law in Quebec – aggravating coordination (Interviews: Brid, Paquet, Saad.)

Thus, the very political struggles of Canada manifest itself in its National Capital Region (Veronis 2013). These problems caused by vertical institutional fragmentation leads an expert to conclude that “Ottawa is probably the hardest capital city-region to govern” (Interview Paquet).

Low local tax autonomy does not enable coordination, however, it may moderate negative effects of non-coordination because I did not find any beggar-my neighbor behavior. Ottawa and Gatineau have different tax rates and Gatineau is for example able to offer more specific tax incentives (Tassonyi 2009, 58, Interviews: Lazenby, Temsamani). Yet, these different tax settings does not lead to much competition in firm acquisition because tax competition between municipalities only occurs around the property tax base. Thus, it seems that vertical institutional fragmentation constrains coordination, and in a second step, low local tax autonomy does constrain competition between Ottawa and Gatineau.

This lack of coordination in the FUA is not limited to inter-provincial coordination. The two core municipalities of the FUA – Ottawa and Gatineau – see no need to cooperate with the other smaller municipalities in their respective province. This can be explained by geography and more precisely by the urban-rural divide (Taylor 2011, 30). The economic bases of the two core municipalities and the remaining rural municipalities are so diverse that coordination in locational policies makes not much sense.

### Testing expectation 5.2

*E 5.2: Coordination aims at overcoming the constraining parts of the MLG setting.*

Expectation 5.2 is partly supported. Ottawa is constrained in its local autonomy because of federal influence via the NCC and low local tax autonomy. Furthermore, Ottawa is vertically institutionally fragmented and thus constrained on the public horizontal dimension. The new governance model between the NCC and the two cities Ottawa and Gatineau may overcome the governance problem of the past and thus for Ottawa a better way to deal with the local autonomy constraints ensuing from the NCC.

The influence of the NCC is based on its authority over large areas of federal land in Ottawa. Since 2014 the relationships between the City of Ottawa and the NCC became more institutionalized. In past the governance model between the NCC and the city halls in Ottawa and Gatineau was ad-hoc and mostly informal (Interviews: Kristmanson, Lapointe). Now there is an agreement that the two mayors and the CEO of the NCC meet all four months. Additionally, the CEO of the NCC meets the mayors bilaterally all four months (Interview Kristmanson). Thus, this new governance

model may be interpreted as a way to overcome the governance problem of the past with the NCC and thus a better way to deal with the local autonomy constraints ensuing from the NCC.

Coordination is not able to overcome low local tax autonomy. As any other Canadian municipality, Ottawa has to accept these constraints of local tax bases. As I have outlined in E5.1, the cities of Ottawa and Gatineau make few attempts to overcome vertical institutional fragmentation. However, the new, more institutionalized governance model between the NCC and the cities of Ottawa and Gatineau may also function in future as a coordination platform that possible help to overcome the divide between Ottawa and Gatineau.

#### 6.2.6. Public funds and compensation payments

Public funds are an important revenue source for the City of Ottawa as they constitute a quarter of the annual revenue. In 2015, 19% of the local budget was from conditional and unconditional higher-tier governmental grants and the payments in lieu of taxes (PILTs) accounted for 6% of the local budget (City of Ottawa 2016b; see subchapter 6.1.4).

Horak (2012, 342–43) traced two basic forms that explain how Canadian local governments are trying to tap into public funds. First, they form alliances to lobby provincial and federal governments to set up such funding schemes. Secondly, individual cities, often supported by local business elites, compete vigorously for support from existing funding sources. I found the latter form of local government intervention in Ottawa. Invest Ottawa is responsible to attract public funds in the policy field of economic development (Interview Lazenby). These economic development funds from higher-tier governments are mostly project-based or program-based. Some of them require matching contributions either from other public actors or from the private sector to diversify the risk (Interviews: Fielding, Light, McNabb). Invest Ottawa competes vigorously for these funds. Furthermore Invest Ottawa does help firms that are eligible for governmental funding to get access to these funding possibilities (Interviews: Lazenby, Terry).

Since 1950 the federal government pays PILT's based on valued assessments of the tax-exempted properties. The PILT Act of 2000 organizes the establishment of a PILT Dispute Advisory Panel with the mandate to resolve differences between the federal government and local taxing authorities because the exceptional nature of these properties often poses difficulties in calculating the appropriate value (Tassonyi 2009, 68–70). The PILT's do not cover the exact same amount that property tax would and they do not cover extra services (Ircha and Young 2013, 159). Thus, “in the City of Ottawa, for example, there appears to be a considerable gap between PILT's and the

amount of property taxes that would be paid, based on the property values set by the Ontario Municipal Assessment Corporation” (Ircha and Young 2013, 159).

These PILTs are remarkable from a comparative perspective on financing capital cities because only few countries established such compensation payments. Thus, Ottawa is relatively better off than most other capital cities because of these rather generous PILTs (Slack and Chattopadhyay 2009; Chattopadhyay 2011, vi). Besides these PILTs, the federal authorities do not compensate for capital city related costs, such as increasing policing services (Tassonyi 2009, 72).

### Testing expectation 6

*I: Low local tax autonomy enables to ask for public funds.*

*II: Capital city specific constraints enable to ask for compensation payments.*

Expectation 6 is supported. Low local tax autonomy explains the importance of public funds and how they influence the formulation of locational policies on the local level. The capital city specific constraints of the local autonomy of Ottawa explains the existence of PILTS.

Constraints in the local tax autonomy of Canadian municipalities led to a dependency on public funds. Public funds have to step in to compensate for constraints in the local tax bases. Ottawa is very active and strategic about tapping into public funds. For example, the whole public private partnership set-up of Invest Ottawa can be seen as a strategy to tap into provincial public funds (Interview Light) because these public economic development funds often need matching funds or other types of private sector involvement. An economic development agent explains: “[T]he evolution of the ‘triple helix’ model or public private partnership models is stimulated by the requirements of the federal or provincial funds to match these funds. It is mostly the private sector that matches those funds. (Interview Fielding). The same mechanism is at work regarding incubators or accelerators. The higher-tier governmental money is incentivizing the establishment of such incubators. Consequentially, the city establishes such start-up tools to be interesting for governmental investment (Interview Saric). Another example is the provincial economic development policy shift. The Province of Ontario used to apply a cluster approach but rather recently they are more interested in fostering technologies than clusters (Interview Fielding). As a consequence, Ottawa shifted its economic development policy from a classical cluster approach in times of OCRI towards a concentration on technology-intense industries of Invest Ottawa. Thus, the public funds are important for Ottawa in that it adjusts its locational policies to the economic development paradigms of the governmental entities that award these funds.

The PILTs have been established in the context of the Gréber plan in 1950 that reorganized the relationship between the federal and the municipal level in Ottawa. The same plan led to the creation of the NCC from its predecessor organization Federal District Commission. The land covered by the NCC was greatly expanded by a very active program of property acquisition (Andrew 2013, 92). Thus, I would argue that the establishment of PILTs may be interpreted as a kind of compensation for the capital city specific constraints of Ottawa’s local autonomy.

6.3. Explaining locational policies in Ottawa

In this subchapter, I will firstly summarize the manifestations of locational policies in order to depict the locational policies agenda of Ottawa (see Table 26). In the following, I will discuss the tested expectations (see Table 27) and try to connect them in order understand the interdependencies in formulating locational policies.

Table 26: Locational policies agenda of Ottawa

<b>Locational policies</b>	<b>Manifestations of locational policies</b>
Innovation policies	- Focus on technology-intense key industries - Support for start-ups and entrepreneurs
Image building	- Two-dimensional strategy: “G7 capital and high-tech town”
Business prerequisites	- Focus on developing land and real estate, especially ensuring office occupancy in Downtown
Acquisition	- Threefold acquisition strategy based on: 1) Soft-landing spot in the North American market 2) Local key industries 3) Local talent pool
Coordination	- No coordination with Gatineau nor with neighboring Ontarian municipalities
Public funds compensation payments	- Payments in lieu of taxes - Importance of public funds
Locational policies agenda	- Focus on fostering innovation - Two-dimensional image building as a government city and business city - Developing land and real estate to increase property tax base - Attracting public funds

The locational policies agenda of Ottawa is dominated by four topics. First, the overarching topic of the newest local economic development plan is innovation. The two main strategies to foster innovation are increasing the linkages between key actors in the local economy and providing services for start-ups. Second, Ottawa tries to position itself simultaneously as a government town and as a business hub. This is best detectable in image building with its strategy to present itself as a G7 capital and a high-tech town. Third, the city hall is active in ensuring and increasing the value of the property tax base. These activities are concentrated Downtown because of its rather high

land and real estate value, i.e. the stakes are the highest Downtown. Fourth, the centrality of public funds for the budget of local government in the Canadian MLG system leads to a systematic attraction of public funds. These funds come with strings attached, i.e. certain conditionalities that are tied to this governmental money. Similarly to The Hague, the importance of these funds for the local budget may explain why these conditionalities lead to a diffusion of economic development paradigms from the federal and the provincial level into locational policies in Ottawa. Thus, in a setting with limited local tax autonomy, these conditionalities are a strong policy diffusion mechanism.

Table 27: Expectation testing Ottawa

Expectation	Expectation testing	Specifications
E1.1: A moderately developed RIS enables the formulation of innovation policies.	Not supported	-Reversed causality
E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported	-
E2: A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported	-
E3: Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.	Supported	-
E4: A moderately developed RIS enables the adaption of a profound and large-scale acquisition strategy.	Not supported	Acquisition strategy is based on other assets than its RIS such as being a ‘soft-landing’ spot to the North American market and its highly-educated working force
E5.1: High institutional fragmentation constrains and low local tax autonomy enables regional coordination what leads to negative coordination.	Partly supported	Vertical institutional fragmentation constrains regional coordination Low tax autonomy rather constrains tax competition than enabling coordination
E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.	Partly supported	The new governance model to coordinate with the NCC may be a way to better deal with the capital city specific constraints Coordination does not aim to overcome low local tax autonomy Coordination does not aim to overcome the vertical institutional fragmentation
E6: I: Low local tax autonomy enables to ask for public funds. II: Capital city specific constraints enable to ask for compensation payments.	Supported Supported	-

Table 27 summarizes the tested expectations in the case of Ottawa. In the following paragraph, I discuss the expectations stemming from the RIS as the explanatory variable whereas in the next paragraph I discuss the expectations stemming from the MLG setting.

Expectation 1.1 is not supported whereas expectation 1.2 is supported. It seems that innovation policies are not constrained or enabled by a moderately developed RIS but that innovation policies are rather strategic policy tools that target the weaknesses of a RIS. The development of the image building strategy in the last 15 years strongly supports expectation 2. Only when the RIS was dynamic, was Ottawa able to put forward an image of a business town. Contrary to the expectation 4, the RIS does not influence the acquisition strategy of Ottawa. Invest Ottawa tries to acquire firms with alternative arguments such as being a 'soft-landing spot into the North-American market' or by pointing to its highly educated population.

Low local tax autonomy has, as expected, a constraining influence on the formulation of business prerequisites (E3) and an enabling influence on the attraction of public funds and compensation payments (E6). Given that the limited discretion in tax instruments, locational policy instruments in the business prerequisites category focus on increasing the value of land and real estate. Ottawa does it extensively because these activities have rather direct implications on the local budget. On the other hand, low local tax autonomy leads to a dependence on public funds and compensation payments. Through the conditionalities of these public funds, the federal and provincial economic development policy paradigm diffuse into locational policies formulation on the local level. The horizontal coordination in the FUA Ottawa-Gatineau is constrained by the vertical institutional fragmentation, i.e. provincial border, at the very heart of the region (E5.1). Furthermore, coordination is not able to overcome low local tax autonomy. However, a new governance model between the NCC and the cities of Ottawa and Gatineau may overcome some of the capital city specific constraints (E5.2).

#### 6.4. Conclusion

Generally, the city officials take an active role in locational policies formulation. They perceive the city as a central actor that coordinates and facilitates the formulation and implementation of locational policies. This observation is supported by Andrew and Doloreux (2014, 138) who described the local governance of economic development as two-dimensional: On the one hand, local officials try to engage private-sector leaders in economic development organizations, but on the other hand city hall prefers to play an active and leading role in these locational policies formulation.

The locational policies agenda is dominated by four main topics. Firstly, innovation is fostered by aiming to increase the linkages between the local key economic actors as well as by providing services for start-ups. Secondly, Ottawa positions itself simultaneously as a government town and a business hub. Thirdly, the city hall is active in developing the real estate property base and fourth, the city hall aims to attract public funds.

The MLG setting and especially low local tax autonomy is a better predictor of locational policies than the moderately developed RIS. Low local autonomy constrains some locational policies (such as income taxes) but is enabling to ask for public funds and compensation payments. Low local tax autonomy causes a schizophrenic orientation of some locational policies. On the one hand, they are output-oriented, i.e. should help to develop the local economy, on the other hand, they are simultaneously input-orientated, i.e. they target public funds that should co-finance these economic development policies. Thus, the conditionality of central governmental funds are strong steering mechanisms in a setting of low local tax autonomy.

Low local autonomy causes a locational policies agenda that operates with an avoiding spending logic. More precisely, locational policies aim to create jobs in Ottawa. Among other factors, jobs reduce local social assistance spending. It is currently under negotiation what proportions of social assistance is funded by the Province of Ontario and thus how much local governments have to contribute to social assistance. This case study suggests that if local governments contribute less to social assistance in future, the focus on job growth will attenuate, and vice versa.

## 7. The Hague

The Hague is also known as ‘The Residence’ (Meijers et al. 2014). The term refers to The Hague as the seat of the Dutch royal family and all three branches of political power. ‘The Residence’ also reflects that The Hague exerts the capital city function but is not the constitutional capital city because this title is reserved to Amsterdam. The Hague does not only host most of the major national government organizations but it is also home to an impressive number of international organizations that are active in the field of international law and security. The Hague is also called the ‘Second United Nation (UN) City’ as it hosts, among others, the only UN body outside of New York, namely the International Court of Justice. Given this international importance, The Hague is mostly described and studied in the context of its international organizations (van Krieken and McKay 2005b; van der Wusten 2006; Groen 2014; Meijers et al. 2014).

The importance of the public sector organizations gives The Hague a distinct economic profile that is complementary to the other major Dutch cities such as Amsterdam, Rotterdam and Utrecht (Meijers 2007; Meijers et al. 2014, 92). Thus, The Hague fits the category of SCCs: It is economically inferior compared to the main economic centers such as the buzzing Amsterdam and near-by harbor city Rotterdam, but it is the political center of the Netherlands as the current Mayor of The Hague Jozias van Aartsen states: “For many people in the Netherlands, the name of our city is synonymous with government, politics and parliament” (City of The Hague 2014g, 3).

Table 28 summarizes the case study The Hague. The locational policies meet most of the expectations. In general, the locational policies mainly target the cluster of international organizations and the emerging (cyber) security sector. This resembles the overall economic development plan that is to leverage its international status as the city of peace and justice while simultaneously developing towards an international business city. Especially the restricted local tax autonomy has consequences for locational policies formulation. Low local tax autonomy incentives infrastructure development and leads to a focus on attracting public funds.

Table 28: Expectations and findings of the case study The Hague

Nr.	Explanatory factor	Phenomenon to be explained	Expectation	Result
E1	RIS - Moderately developed	Innovation policies	A moderately developed RIS enables the formulation of innovation policies.	Not supported
E1.2	RIS - RIS failure(s): (Organizational thinness), (fragmentation), lock-in	Innovation policies	Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported
E2	RIS - Moderately developed	Image building	A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported
E3	MLG setting - low local tax autonomy	Business prerequisites	Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.	Supported
E4	RIS - Moderately developed	Acquisition	A moderately developed RIS enables the adaption of a profound and large-scale acquisition strategy.	Partly supported
E5.1	MLG setting - low institutional fragmentation - low local tax autonomy	Regional coordination	Low institutional fragmentation and low local tax autonomy enable regional coordination.	Partly supported
E5.2	MLG setting - constrained in local tax autonomy	Coordination	Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported
E6	MLG setting - low local tax autonomy - No capital city specific constraints	Public funds and compensation payments	<i>I:</i> Low local tax autonomy enables to ask for public funds. <i>II:</i> No capital city specific constraints constrain to ask for compensation payments.	Supported Supported

The remainder of this case study chapter is structured in four subchapters. The first subchapter gives a general description of The Hague as well as discusses the manifestations of the explanatory factors. The second subchapter addresses the different locational policies categories and tests the respective expectation(s) one step at a time. The third subchapter links the different locational policies to a locational policies agenda and discusses the results in an integrative manner. Finally, the last subchapter concludes the case study.

## 7.1. Profile of The Hague

### 7.1.1. History

The Hague was never an economic or military center. Instead it served since the Early Middle Age as a neutral meeting place, a site for negotiations and a venue for arbitration for the powerful Dutch city-states of the late Middle Ages, namely Amsterdam, Delft, Dordrecht, Gouda, Haarlem and Leyden (van Krieken and McKay 2005a, 3). It was therefore a straightforward decision to place the Dutch political and judicial organizations in The Hague which was done by Prince Maurice in 1585. Since then, The Hague has functioned for most of the time as the political seat of various Dutch and occupying governments. During the Dutch Golden Age, the City flourished “due to the presence of the government, the court and judicial bodies, in spite of the fact that it was not a trading city” (Lagerwood 2005, 49). The Hague never obtained official Dutch city-rights which may be explained by the reluctance of the Dutch political leaders to subordinate the government under the rule of powerful Middle Age city magistrates (Meijers et al. 2014, 93).

The reason why Amsterdam has obtained the capital city status is connected to the French occupation of The Netherlands. During the rule of French King Louis as the King of Holland (1806–1810), the capital city status switched from The Hague to Utrecht and then to Amsterdam. Napoleon Bonaparte took over the leadership from his brother Louis in 1810. He preferred to settle in Amsterdam and thus made it his permanent capital. After the withdrawal of Napoleon in 1813, the Dutch decision makers returned the seat of government to The Hague but left the capital city status to Amsterdam, as it was not considered to be very important (Meijers et al. 2014, 93) and/or it was a compromise because it “met both the feelings of self-esteem of the burghers of Amsterdam and the fears of other provinces of a renewed dominance by Holland and Amsterdam in particular” (Donner 2008, 201). Since then, the Netherlands has known a divide between the constitutional capital city status and the actual capital city function.

The Hague’s rise as the location of prominent international legal organizations is often described as a legacy of the Dutch jurist Hugo Grotius. The Hague was home to Grotius when he wrote his influential *Mare liberum* (The Free Sea). However, he wrote his master piece *De Jure Belli ac Pacis* (On the Law of War and Peace) that made him the ‘father of international law’ in the French exile in 1625 (van Krieken and McKay 2005a, 5; Donner 2008, 201).<sup>35</sup> The first Peace Conference in 1899

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<sup>35</sup>Hugo Grotius or *Huigh de Groot* was born in Delft in 1583. Grotius advocated for an international legal order that is no longer rested on divine law or dynastic traditions but on the notion of a worldwide community of law and the natural rights of individuals. Dutch political leader sentenced him to life imprisonment due to his political beliefs. He

initiated by the Russian Czar Nicholas II made The Hague truly a reference point for international law (Eyffinger 2005). One direct outcome of the first Peace Conferences was the establishment of the Permanent Court of Arbitration in 1899 which has been the first institution for settling interstate disputes (van Krieken and McKay 2005a, 17). The following building of the Peace Palace was important to symbolically denote The Hague to international law which has been made possible by the donations of the steel magnate and philanthropist Andrew Carnegie.

In 1920, the first assembly of the League of Nations adopted the Statute of a Permanent Court of Justice of the League of Nations which should be established in the Peace Palace alongside the existing Permanent Court of Arbitration. After the Second World War these institutions were reorganized under the International Court of Justice – which is an official UN organ. The Dutch government in this period was benevolent but not active in acquiring such organizations (van der Wusten 2006). The Cold War was then freezing global multilateral cooperation what stopped the creation of international organizations. However, within the Western block major international legal institutions emerged that were not located in The Hague such as the Court of Justice in Luxembourg or the European Court of Human Rights in Strasbourg. The end of the bipolar world order triggered a sprawl of new multilateral organizations and in that wave The Hague managed to further enlarge and diversify its international cluster by successfully bidding for organizations such as the Organization for the Prohibition of Chemical Weapons (OPWC), the High Commissioner of National Minorities, the International Criminal Court of Former Yugoslavia, the International Criminal Court, Europol and Eurojust. Lagerwaard (2005) describes the period after the end of the Cold Wars as the ‘renaissance’ of The Hague.

Regarding national government organizations, the national spatial planning policies in the 1970s did not favor a further concentration of functions in the major Dutch cities but rather strived for regional equalization. The aim was to create jobs in peripheral regions of the country by decentralizing government organizations (Meijers et al. 2014, 93). In the 1970s and 1980s, The Hague lost some ministries and governmental agencies to the neighboring municipalities of Rijswijk and Voorburg, but also to some more peripheral regions of the country. In that time, even the state-owned telecom company KPN (*Koninklijke KPN NV*) relocated to Groningen. The pendulum swung back in the 1990s as the central government paradigm shifted to a strengthening of Dutch cities in order to increase their international competitiveness (Meijers et al. 2014, 93). These policy shifts allowed the ministries and KPN a return to The Hague.

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was able to escape from his prison in *Loevestein Castle* and what makes the claim of The Hague to be the home of Grotius somewhat presumptuous (Donner 2008, 197).

### 7.1.2. Geography and population

The Netherlands is a densely populated country that mostly features small or medium-sized cities. The Hague is located in the Randstad that is an archetypal example of a polycentric urban region located in the Western part of the Netherlands. The name Randstad comes from the Dutch word *Rand* which means rim and refers to the horseshoe-shaped encircling of a green open area called the Green Heart (Meijers 2005, 771). The Hague is besides Amsterdam, Rotterdam and Utrecht one of the four urban centers in the Randstad. The Randstad can be further divided into a north wing which includes Amsterdam, Utrecht and surrounding cities and a south wing. The South Wing is the part of the Randstad that belongs to the province South Holland (*Zuid Holland*) and includes Rotterdam, The Hague and surrounding cities such as Delft or Leiden. Around 7.8 million people live in the Randstad (equal to 46 % of the Dutch population), an area constituting less than 20 per cent of Dutch territory (Randstadtmonitor 2014). The province South Holland covers about a third of the whole Randstad and features 3.5 million inhabitants. The FUA consists of the City of The Hague and five more neighboring municipalities.<sup>36</sup> The FUA grew constantly over the last 35 years. Generally, the small-scale of The Netherlands and overlapping spheres of influences in the Randstad complicates the identifications of FUAs resulting in varying circulating delimitations with varying degrees of functional coherence (Meijers et al. 2014, 93).

Table 29: Population of different relevant perimeters

Scale	1980	1990	2000	2010	2015	Change (%) 1980-2015
Municipality The Hague ( <i>s-Gravenhage</i> ) (1 municipality)	456'886	441'506	441'094	488'553	514'861	+12,69
Agglomeration The Hague (9 municipalities)	681'045	691'872	715'300	802'746	838'015	+23,05
Province South-Holland ( <i>Zuid-Holland</i> ) (60 municipalities)	3'083'555	3'219'839	3'397'744	3'505'611	3'600'011	+16,75
Netherlands	14'091'014	14'892'574	15'863'950	16'574'989	16'900'726	+19,94

Source: Statistics Netherlands (2014). For Agglomeration definition: COROP region (*Agglomeratie 's-Gravenhage*).

In 1960, The Hague had about 600'000 inhabitants. In the following years the population constantly dropped until it stagnated at around 450'000 from the year 1986 to 2003. It is projected that The Hague will grow to about 575'000 inhabitants by 2040 (Meijers et al. 2014, 93). The population decrease in the 1970s and 1980s can be explained by the out-movement of white

<sup>36</sup> The OECD defines the FUA The Hague as consisting of eleven local governments with a total population of 906 897 in 2014 (OECD 2015).

middle-class families to neighboring towns such as the newly created satellite town of Zoetermeer (Meijers et al. 2014, 93) which explains the constant growth of the FUA The Hague. This is a classic suburbanization pattern that many cities in Western democracies experienced in the last three decades of the Twentieth century.

7.1.3. Regional Innovation System

The RIS in The Hague can be characterized as being in an advanced stage. It is organizationally thick because it exhibits various clusters and research organizations stemming from the capital city function as well as The Hague’s international role as the platform for discussing international law issues. The knowledge interactions vary given the different clusters. The knowledge dynamics are accelerating in the security cluster and are high in the international organization cluster, whereas in the other three clusters the knowledge dynamics are rather low. Although the capital city function was crucial in the development of these clusters, nowadays they are operating rather independently from central government organizations.

Knowledge application and exploitation subsystem

The tertiary sector makes up 88% of all employment in The Hague. Governmental organizations on the international, national, provincial and municipal level are the most important employers in The Hague by providing about 20% of all jobs in the city (City of The Hague 2014e, 49). The ratio between KIBS jobs and high- and medium-tech manufacturing jobs is similarly high in The Hague, Amsterdam and Utrecht (see Table 30). The fact that three out of the four major Dutch cities have such a high KIBS/manufacturing jobs ratio highlights the knowledge-intensive Dutch economy. Only Rotterdam with its huge harbor features a very different economic base.

Table 30: Ratio between KIBS jobs and manufacturing jobs in Dutch cities

Sector	The Hague	Amsterdam	Utrecht	Rotterdam
KIBS	50'098	123'606	109'193	56'645
High-tech industry	3'642	9'665	9'312	15'401
<b>Ratio</b>	<b>13.8</b>	<b>12.8</b>	<b>11.7</b>	<b>3.68</b>

Source: LISA (Landelijk Informatiesysteem van Arbeidsplaatsen) (2016). Proprietary data, COROP 2012.

The RIS in The Hague features five major clusters that are all related to the capital city function or to The Hague’s role as birthplace of international law and peace negotiations. Table 31 describes the four private sector clusters. Out of comparability difficulties, the international organization

cluster is left aside. I will outline in the following paragraphs that these clusters are similar regarding the number of jobs, but the knowledge dynamics within these sectors vary considerably.

Table 31: Private sector clusters in The Hague

Cluster	Security	Telecom & ICT	Oil & Gas	Finance
<b>Number of jobs</b>	10'000	14'000, thereof 10'000 in telecom	12'000	13'000
<b>Knowledge application and exploitation</b> - Important firms	Innovative, big growth-potential - Siemens - Thales - Fox-IT	Under pressure from new technologies - KPN - T-Mobile	Under pressure from new technologies - Shell - Q8	Limited growth-potential - Natinonale-Nederlanden - ING
<b>Knowledge generation and diffusion</b> - Important organizations	Intensive cooperation - TU Delft - National Forensic Institute - TNO	Sparse cooperation - TU Delft - The Hague University of Applied Science	Sparse cooperation - TU Delft - TNO	Sparse cooperation - Erasmus University Rotterdam
<b>Governmental organizations</b> - Important governmental organizations	Government as a regulator and buyer - Ministry of Defense - Ministry of Security and Justice	Government as a regulator (and buyer) - Ministry of Economic Affairs	Government as a regulator - Ministry of Foreign Affairs	Government as a regulator - Ministry of Economic Affairs - Ministry of Finance
<b>Knowledge dynamics</b>	High	Low, no common ground for cooperation	Low, no common ground for cooperation	Low, no common ground for cooperation
<b>Outlook</b>	Big growth potential, ambition to be the number one cyber security hub in Europe	Search for a new business model	Search for new energy technologies	Limited growth-potential, competition with the financial cluster in Amsterdam

Source: Own compilation, Job numbers from The Hague (2014a; 2014b; 2014c; 2014d).

The security cluster is a prime example of an innovative sector that connects firms with research institutes and public sector organizations. In the first place, security firms have established themselves in The Hague because of the spatial proximity to international organizations that are specialized in the area of security and conflict resolution such as Europol, Eurojust, and the International Criminal Court. As the dependency on digital technology has increased, it has been primarily the Dutch public security organizations that have started to demand cyber security products (Interview den Bruijnen). The fast-moving nature of cyber technologies requires governments to stay in touch with recent innovations regardless if these innovation have been developed in the public or the private sector. As a consequence, governmental organizations act as buyers as well as innovation partners because they constantly request innovative technologies but do as well accompany the whole product development process (Interview den Bruijnen). The

Hague managed to set-up a physical center, called *The Hague Security Delta Campus*, to foster the knowledge exchange between the important actors in the ‘triple helix’. This cluster has grown to the largest European security cluster. It managed to overcome the fragmentation once prevailing in The Hague’s security sector (see subchapter 7.2.1).

The telecom & ICT cluster originates from the formerly state-owned telecom company KPN. Other big telecom players like T-Mobile and Huawei chose to settle in The Hague because they wanted to avoid locational disadvantages by not having spatial proximity to government agencies who regulate the telecom market (Interview Adarghal). KPN, T-Mobile and Huawei are all in the top ten of firms providing employment in The Hague (City of The Hague 2014c). Small and medium sized supplier firms gather around these big anchor companies. The dynamics in this cluster are driven by competition between the big anchor companies rather than cooperation what obstructs knowledge interactions (Interviews: Krol and Kok, Oliver).

The ecosystem of the oil & gas cluster resembles the telecom & ICT cluster (Interview Krol and Kok). The anchor organization Royal Dutch Shell, the world’s largest corporation in terms of turnover (Meijers et al. 2014, 92) is located in The Hague because the first oil extractions in the former Dutch colony Indonesia needed authorization and support from the colonial administration. Similarly to KPN, the presence of Shell attracted other major oil companies like Kuwait Petroleum (Q8) as well as operators, engineering firms and suppliers. The oil & gas cluster features inter-regional linkages especially with Rotterdam. Whereas Rotterdam concentrates on ‘downstream’ technologies – refining, processing and purifying of crude oil and natural gas plus the harbor as an important transportation hub, The Hague concentrates on ‘upstream’ technologies such as the exploration and production of crude oil and natural gas as well as headquarter functions (Interviews: Dencher, Krol and Kok).

The finance cluster is home to a large variety of pension funds, asset management companies and insurances. Thus, the finance cluster in The Hague is sometimes labeled as ‘slow finance’ to distinguish the financial activities to the stock exchange markets of, for example, Amsterdam (Interview Oliver). ‘Slow finance’ should indicate financial activities with a focus on sustainability, social responsibility and long-term rewards. These kinds of companies are dependent on the state as a regulator what may explain the development of such a finance cluster in The Hague. However, this sector is more a geographical concentrated assemblage of similar financial firms than an interconnected and interactive cluster (Interview Oliver).

Lastly, the international organization cluster is home to 240 international organizations and 129 embassies and consulates which accounts for around 19’500 jobs. The direct employment triggers

another 18'000 indirect jobs, of which, 75% are staffed with people with secondary or lower education (Decisio 2011, xi). Despite the cluster is often labeled peace and justice cluster (see subchapter 7.2.2), only 53 of 310 international organizations operate in this specific area (Meijers et al. 2014, 95). The cluster of international organizations displays fruitful within interaction but it lacks economic potential as it is merely budget-driven and does not offer concrete product innovations (Interviews: Van Ommeren and Wijnen).

### Knowledge generation and diffusion subsystem

The Hague was never known as a city of education. The city's need for an educated work force has always been supplied by other Dutch university towns such as the neighboring Leiden or Delft (Interviews: J. de Vries, Shimson, van Ommeren and Wijnen). The Hague may be even the largest European city without its own university (Interview Meijers). This lack of tertiary education is only partly compensated by a large University of Applied Science with about 20'000 enrolled students. An important technical knowledge organization is the Netherlands Organization of Applied Scientific Research (TNO) which is devoted to provide technical expertise in various policy fields. Furthermore, The Hague hosts several knowledge organizations in the fields of international law, conflict resolution and security.<sup>37</sup> The Hague Academic Coalition (HAC) is a network of academic institutions in the fields of peace, justice and security with the goal to join forces between these diverse research institutes (Wusten 2006, 258). This bulk of organizations is embedded in the global security community but also display intra-regional linkages with federal agencies and contractors as well as university institutes and other research organizations. In that way, these internationally-oriented knowledge organizations enable The Hague to function as a global knowledge hub for security (Warland 2016c).

### RIS development

The knowledge application and exploitation subsystem is organizationally thick whereas the knowledge generation and diffusion subsystem is thin regarding educational organizations, but thick regarding international knowledge institutes in the field of security and international law. The clusters differ much in respect to their knowledge dynamics. Whereas the knowledge diffusion is sophisticated in the (cyber) security cluster and to some extent in the international organizations cluster, the other three clusters are rather simple geographical concentrations of firms in the same

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<sup>37</sup> Examples are the The Hague Center for Strategic Studies, the T.M.C. Asser Institute, or the Netherlands Institute of International Relations *Clingendael*.

sector but they do not have the required knowledge linkages in order to consider them as dynamic clusters. The relevant anchor companies for these latter clusters were originally settled in The Hague because of proximity to the national government in its role as a regulator. Nowadays, the big players in these sectors operate as competitors which limits fruitful interaction. While fragmentation was never an issue in the international organization cluster, fragmentation is starting to alleviate in the security cluster. In the telecom & ICT, the oil & gas, and the finance cluster, fragmentation is still hindering knowledge interactions.

#### 7.1.4. Multilevel governance setting

The Dutch political system is described as a decentralized unitary state (Bos 2013). but with uniform public services across the whole country (Allers and Vermeulen 2014, 4). The Hague has only limited local tax autonomy but does not face constraints due to its capital city function. The FUA The Hague is not institutionally fragmented. Local governance processes are influenced by the corporatist tradition of the Netherlands meaning that a few privileged private sector organizations have access to the local policy-making process (Andeweg and Irwin 2014).

#### Public vertical dimension

The Dutch Republic of the United Seven Provinces (1581 – 1795) was the first federal state in modern history. Cities and provinces enjoyed high autonomy (van Krieken and McKay 2005a, 3). In the aftermath of Napoleon Bonaparte's defeat and in times of the first wave of democratization, Prime Minister Johan Rudolph Thorbecke drastically limited the power of the royal house, increased the power of the parliament, introduced elections and vertical power-sharing. In honoring the father of the Dutch constitution, the vertical governance system in the Netherland is referred to as the 'Thorebecke's house'.

In 2016, 'Thorebecke's house' consists of three state levels: the central government, twelve provinces and 390 municipalities (Statistic Netherlands 2014). The provinces are the least powerful level in the Dutch MLG system (Andeweg and Irwin 2014, 212). The most important tasks of the provinces is the provision of public transport as it accounts for about a third of the provincial expenditures and the supervision of municipalities (Bos 2013, 42). 'Thorebecke's house' drastically extended the tasks of the municipal governments. This additional expenditures were mostly financed by increasing municipal taxes that varied substantially between municipalities. This led to a migration of rich inhabitants in low-tax municipalities and subsequently in a segregation of richer and poorer regions. This process was stopped in 1929 through harsh policy measures: The local

income taxes were abolished and a municipal fund and money transfer system from the central government to the municipalities was introduced. “The purpose was not only to reduce the major differences between municipal income tax rates, but also to ensure the same level of public services in each municipality” (Bos 2013, 35).<sup>38</sup>

Since the early 1980s, the Dutch central government has been transferring a variety of policies to the local governments (e.g. library service, sports and recreation, public housing, social and cultural work, the preservation of monuments). As a consequence, the power structure of the Dutch MLG system shifted towards municipalities at the expense of the provinces (Andeweg and Irwin 2014, 214). Since the decentralization of social assistance to the local level in 2004, welfare and social services are by far the most important budgetary item as it accounts for about a third of municipal budgets (Bos 2013, 42).

Local governments in the Netherlands have three main sources of income: (1) local taxes (mainly on property) and local user fees, (2) unconditional government grants (also called not earmarked revenue-sharing) and (3) conditional government grants (also called earmarked grants-in-aid) (Derksen and Schaap 2010). In the mid-1980s only about 7 per cent of the budget is raised by local taxes, primarily through real estate tax (*onroerendezaakbelastingen*, OZB). The rest of the budget consisted of central government funds which accounted for the saying that Dutch municipalities are tied to the central government by ‘golden ropes’ ” (Andeweg and Irwin 2014, 219). The proportions of local taxes and user fees have multiplied by 3 between 1985 and 2009. Municipalities started increasing the real estate tax rates in order to gain more independently raised revenue. However, in 2006, the Dutch government capped the local real estate tax rates to stop these tax increases. As a compensation, local governments received bigger sums of unconditional governmental grants, but municipalities have started simultaneously to increase user fees such as sewage tax, garbage collection, or fees for building and permits (Derksen and Schaap 2010, 17).

In a comparative perspective of OECD countries the local tax autonomy is limited. Only 3.6% of all Dutch taxes are raised on the local level. This ranks the Netherlands in 28 out of the 34 listed OECD countries (OECD 2014a). Thus, Dutch local governments in the Netherlands have to rely considerably on central government grants. The unconditional grants are allocated based on a complex revenue-sharing formula of 28 variables. The formula does “not only take account of the number of inhabitants, but also corrects for differences in tax-earning capacity (real estate value of dwellings and business property) and external circumstances, like a regional function or the social and physical structure” (Bos 2013, 44). The conditional grant shrank from 70 to 33 percentage

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<sup>38</sup> Bos (2013, chapter 3) offers a good overview over history of the Dutch vertical power-sharing.

points, which increases the spending autonomy of municipalities. About 62% of all conditional grants are earmarked for social affairs and employment in 2009 (Bos 2013, 43), which again shows the importance of this decentralization in 2004. Thus, local governments are in a position in which they have to carry out more services, especially welfare services, and are thereby pressured to find new independent revenue. However, this allows them to simultaneously enjoy more autonomy in spending governmental grants.

Table 32: Local revenue composition City of The Hague

<b>Budgetary items</b>	EUR in Millions	%
Property tax (OZB)	80.5	3.23
Other local taxes	24.7	0.99
Unconditional government grants	1129.6	45.31
Conditional government grants	455.8	18.28
Other income (user fees, interests, dividends and leases)	802.6	32.19
Total	2493.2	100

Source: City of The Hague (2014f, 242–44). Outlook data for 2015.

The constrained local tax autonomy manifests itself in the budget of the City of The Hague (see Table 32). The local taxes make up 4% of the budget. The property tax constitutes 3.2% of the budget and other taxes such as dog tax or tourist tax make up another 1%. Consequentially, the unconditional government grants (about 45% of the budget) and the conditional government grants (about 18% of the budget) are important to sustain the budget of The Hague. Other income such as user fees, interests, dividends and leases make up 32.2% of the income.

Whereas the local tax autonomy is constrained, The Hague does not face additional constraints due to its capital city function. However, the presence of central governmental organizations such as the ministries, international organizations and the embassies diminishes the local property tax base because they are tax-exempt. The Dutch political system does not offer payments in lieu of property taxes that would compensate for these tax losses.

## Public horizontal dimension

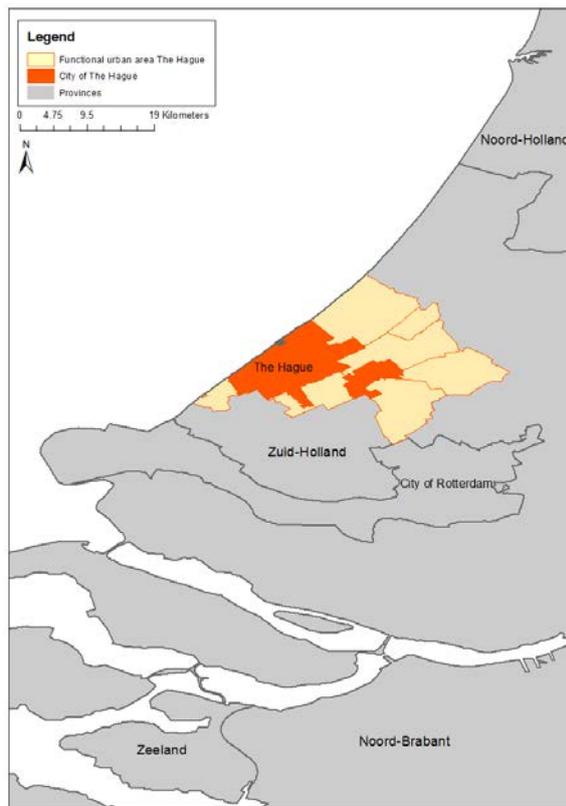


Figure 7: Map of FUA The Hague

Cartography. Mario Huber

The neighboring FUA Rotterdam is very close and functionally connected to the FUA The Hague (Meijers, Hollander, and Hoogerbrugge 2012). Thus one can also speak of a FUA Rotterdam- The Hague. Yet in all those definitions of the FUA no vertical fragmentation exist because all municipalities belong to the Province of South Holland which covers the whole South Wing of the Randstad.

## Local governance dimension

Gladdish (1991, 144) famously described the Dutch governance system as an “orchestra with no conductor”. For Andeweg and Irwin (2014) consociationalism and corporatism are the two most important features of the Dutch policy-making process. Consociationalism is important because it handles and stabilizes major internal divisions along ethnic, religious and language lines. Meanwhile, corporatism is important because interest groups and the government have a relationship that is based on exchange (influence for support) and cooperation rather than competition.

The Netherlands are often described as highly institutionally fragmented. This is especially the case in the small-scaled Randstad where a lot of administrative boundaries cutting through FUAs (Meijers 2005). The small-scale of the Randstad and the close proximity of cities leads to overlapping FUAs which complicates the identification of FUAs in the Randstad region. Thus, varying circulating delimitations of FUAs exist with varying degrees of functional coherence (Meijers, Hollander, and Hoogerbrugge 2012, 6; Meijers et al. 2014, 93). Statistics Netherlands (2014) defines the FUA The Hague consisting of nine municipalities whereas the OECD (2014b) defines the FUA The Hague as consisting of eleven local governments.

The neighboring FUA Rotterdam is very close and

functionally connected to the FUA The Hague (Meijers, Hollander, and Hoogerbrugge 2012). Thus one can also speak of a FUA Rotterdam- The Hague. Yet in all those definitions of the FUA no vertical fragmentation exist because all municipalities belong to the Province of South Holland which covers the whole South Wing of the Randstad.

The Netherlands features a high level of corporatism in a comparative perspective (Siaroff 1999). The ‘polder model’ is often used to describe Dutch policy-making. The ‘polder model’ refers to a cooperation of employers’ organization, labor unions and the governmental entities to address labor issues in a consensus-based, non-institutionalized and non-confrontational way (Andeweg and Irwin 2014, 198). On the national level, the ‘polder model’ is institutionalized in the *Sociaal-Economische Raad* (Social-Economic Council) the major economic advisory council of the Dutch government which comprises of an equal share of employer’s organizations representatives, labor unions members and government-appointed experts. This corporatism tradition of the Netherlands leads to various ‘policy networks’ and ‘policy communities’ on different levels and in different policy fields (Andeweg and Irwin 2014, 198).

This corporatist tradition emulated on the local level. In The Hague talks between labor unions, employer organizations and the city are institutionalized in the so-called Administrative Consultations for Economic Affairs (*Bestuurlijke Overleg Economische Zaken* abbreviated as *BOEZ*). The *BOEZ* is a local counterpart to the Social-Economic Council. In the *BOEZ*, local employers’ organization representatives, local labor unions members discuss the economic agenda together with municipal council members (aldermen) and department officials of the City of The Hague (Interview Schuttenbeld). In the Coalition agreement 2014-2018 (*Coalitionakkoord 2014-2018*) the political parties have indicated their intention to establish an international and economic development board on the metropolitan level Rotterdam-The Hague (City of The Hague 2014h, 9). The goal is to incorporate important private actors and knowledge institutions, i.e. ‘triple helix’ actors, into the formulation of locational policies (Interview Schiebreek).

## 7.2. Locational policies in The Hague

The Hague’s most recent economic development agenda is called ‘Quality is key’ (City of The Hague 2011; also Interview: van Vondel and M. de Vries). It outlines for areas of future development: First, the cluster of international organizations should be extended by mainly fostering growth in the area of (cyber) security. Second, a focus on quality of life aspects should increase the attractiveness of The Hague for high-qualified workforce but as well for visitors. Third, a cluster focus for all existing economic sectors should internally strengthen these clusters, foster the interactions within the clusters, and help to attract new companies to these clusters. And fourth, highly skilled workforce should be locally educated what should be achieved by developing knowledge institutions. Additionally, The Hague formulated its own agenda for its interactional sector under the term ‘The Hague International City’. This agenda aims to strengthen the knowledge infrastructure, spatially cluster the international organizations in the ‘International

Zone', improving the hospitality and creating and maintaining attractive living and working environment (Interviews: Van Ommeren and Wijnen, van Loon; Meijers et al. 2014, 97).

The main goal of these specific economic development agendas and the overall locational policies efforts in The Hague are to create jobs with the underlying rationale that these should decrease the spending on unemployment benefits and social assistance (Interviews: Adarghal, Oliver, Vorkurka and Nijhof). One city official formulated it very straightforward: "Employment is the only thing that counts" (Interview Adarghal). The City of The Hague started to become more active in formulating locational policies during the mid-2000s (Interview van Vondel and M. de Vries). This point in time corresponds with the decentralization of the unemployment and social benefit assistance in 2004. The WSA act (work and social assistant act) decrees that if a municipality spends less on social benefits than the amount it received from this specific budget, the municipality can keep these funds. However, if there is a deficit the municipality must fund this deficit with own resources (Blommesteijn and Geuns 2012). Thus, the economic development plan is driven by an avoiding spending rationale (Interviews: Oliver; Vorkurka and Nijhof; Blommesteijn and Geuns 2012).

The strategy of The Hague is to indirectly create low and middle-skilled jobs by attracting high-skilled jobs (Interviews: Oliver, Vorkurka and Nijhof). A study by the economic consulting company Decisio (2011) calculates that the international organizations in The Hague account directly for 11'329 jobs and indirectly for another 5'707 jobs. In the surrounding region of The Hague another 6'844 direct jobs and 3'448 indirect jobs depend on international organizations. This is insofar interesting for the City of The Hague as most of the indirect jobs are for low and middle-skilled workers (Interview van Ommeren and Wijnen). However, all Dutch local government are exposed to this avoid spending incentives what creates a competition in creating and attracting jobs (Interview Oliver).

On the regional and provincial scale two new actors have been established in 2014-2015 that engage in formulating locational policies. The Metropolitan region Rotterdam The Hague (MRTH) was established in the beginning of 2015. The driving forces behind MRTH are the cities of Rotterdam and The Hague. This new coordination body captures 2.2 Mio inhabitants, consists of 23 municipalities, employs around 100 staff members and represents an economic region of international importance (Interviews: Meijers, Nijhof and Vorkurka, J. de Vries). The main priority of the MRTH is public transportation, but of second priority are investments in regional economic development (Interview Nijhof and Vokurka). The Province of South Holland established its own economic development agency called InnovationQuarter (IQ) in 2014 with the initial goal to consolidate or at least coordinate economic development efforts in its territory (Interview Kok and

Krol). However, IQ stands in competition with MRTH which reflects the competition between the Province of South Holland and its two biggest cities (more subchapter 7.2.5).

### 7.2.1. Innovation policies

The Hague puts a strong emphasis on innovation policies by mainly applying three different innovation policy tools. First, The Hague adopts cluster policies that should foster knowledge interactions between firms, research institutes and public actors within the clusters. Second, public funds should compensate for the lack of venture capital. And third, the City of The Hague tries enlarge the pool of knowledge institutes by attracting research institutes and bringing private R&D into the city.

### Clusters policies

All Dutch governmental levels rely on cluster policies. This Dutch economic development policy paradigm diffused downward from the national level which started in 2006 a nationwide cluster program called Peaks in the Delta (*Pieken in de Delta*). In 2010 (ongoing), the top sectors program has been established as a further development and adjustment of Peaks in the Delta.<sup>39</sup> The top sectors program requires all actors of the ‘triple helix’ (governments, business and knowledge and research institutes) to be active in regional clusters in order to be supported from the national level (Interview van der Linden). Also *IQ* – the economic development agency of the Province of South Holland – pursues a cluster approach.<sup>40</sup> The City of The Hague applied cluster policies on all its economic sectors. The economic department hired account managers for each economic sector. However, companies in the sectors telecom & IT, Oil & gas and finance showed little interest in engaging in clusters activities. The ecosystem of these clusters consists mainly of a few big anchor companies that are competitors and several small and medium-sized companies that are specialized suppliers for these big anchor companies. In such a context knowledge diffusion is rather seen as a threat to a company than as a potential driver for innovation (Interview Oliver). An example is KPN that prefers intra-organizational innovation and is reluctant to add innovation from outside the company (Interview Blokmaker).

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<sup>39</sup> The Netherlands identifies nine top sectors: Horticulture and propagation materials, agri-food, water, life sciences and health, chemicals, high-tech, energy, logistics, creative industries. The Hague does not feature one of these sectors, but the (cyber) security cluster is incorporated in the high-tech top sector (Interview van der Linden).

<sup>40</sup> IQ focuses on six clusters: life sciences & health, cleantech, security, horticulture & agrifood, high-tech systems, and maritime industry.

The security sector, on the other hand, and to some extent the international organizations are more open towards knowledge sharing. The cluster of international organizations displays fruitful within interaction but it lacks economic potential as it is merely budget-driven and does not offer concrete product innovations (Interview Van Ommeren and Wijnen). Hence, the City of The Hague does not pursue a cluster approach in the international organization but focuses primarily on the (cyber) security sector when applying cluster policies.

In 2010, the City of The Hague conducted a potential analysis of their local economy triggered by reorganizations of the national economy development policy (top sectors program) and cutbacks in the telecom sector. The economic development officials in The Hague searched for highly innovative sectors that are related to already existing clusters. The analysis has revealed that some present ICT companies focus on security issues but were only very loosely connected and lack links with potential governmental partner and research institutes (Interview Adarghal). The first cluster attempts focused on “security & safety, then only in security and now they sharpened their profile to cyber security and became Europe’s leader in cyber security” (Interview Krol and Kok).

In a sense, the City of The Hague jumped on a bandwagon, as in 2010 a loose consortium of firms, research institutes and public actors started to organize themselves in a security network in The Hague. The consortium got subsidized by the Dutch Ministry of Economic Affairs with the idea to strengthen research in cyber security, forensic research, national security, protection of critical infrastructure and urban security. Only in 2012 did the Municipality of The Hague start to support the project under the label *The Hague Security Delta* (HSD) whereby delta is the Dutch version for (silicon) valley. However, over the last three years (2014-2016) the City of The Hague invested about 5 Million Euro into the HSD. 2.5 Million Euro were invested in HSD operations, 1.5 Million Euro in the HSD campus, and 1.5 Million Euro in the HSD development fund (Interview de Bruijnen).

In the beginning of 2014, a new building called the HSD campus opened its doors. The HSD campus should operate as a facilitator for (face-to-face) interactions between researchers, students and innovation managers. The HSD established a *Cyber Security Academy* in cooperation with various research institutes in the region such as the Delft University of Technology, University of Leiden (The Hague Campus) and the Hague University of Applied Sciences. The HSD grows on various ends with a fast pace. As a publicly recognized success, NATO has decided to concentrate all its activities in the field of information technology, digital security of private networks and missile defense in The Hague (The Hague Security Delta 2014). Furthermore, around 500 jobs in cyber security have been created, the HSD campus grew to 44 organizations that are renting offices and 18 companies which have been acquired (Interview de Bruijnen). By focusing on cyber security,

The Hague is investing in a rapidly growing market with intense research activities (Interviews: de Bruijnen, Meijers).

Cyber security is a typical highly regulated sector that profits from the capital city function in The Hague. The state is traditionally at the forefront in the field of security. In this technology-intense sector the nation state has to remain on the cutting-edge of digital technology development. Thus, public cyber security organization are dependent to keep in touch with research activities of companies and research institutes. However, the public sector is also important as a buyer and contracting authority (Warland 2016c). Given this role of the state, the proximities to public bodies like the Ministry of Defense, the Ministry of Security and Justice and the Netherlands Forensic Institutes is crucial for the cyber security companies (Interview de Bruijnen). In such a context sharing knowledge between public actors and companies seems fruitful what makes cyber security an optimal sector for applying cluster policies.

#### Start-up promotion

Neither does an established entrepreneurial culture exist in The Hague, nor is much venture capital available (Interviews: Genet and van der Klaauw, Kok and Krol). A little bit of public money flows to incubators. The City of The Hague contributes to the *Connectivity Accelerator* that focuses on the development of start-ups in telecom & IT. Another incubator specialized on the creative sector is the *Caballero factory* (Interview Oliver). The Center for Innovation, an innovation coordination platform associated with the Campus The Hague University of Leiden, focus on technological trends in education and research in the areas of peace, justice, security and prosperity and thus tries to connect innovation activities to local competences in international law and conflict resolution.

The City of The Hague provides a public fund with the goal to support start-ups, research projects and small and medium-sized companies (Interview van Vondel and M. de Vries). A newer version of the fund may spend EUR 6 million over the period 2015-2018 with the requirement that start-ups and companies have to focus on societal and technological innovations. Another public fund is established and managed by IQ (provincial level) with additional contributions from the central government and municipalities in the province South Holland. The Dutch Ministry of Economic Affairs and the Province of South Holland each paid 10 Million Euro in this fund. Different cities in the Province of South Holland contributed a total of 7-8 Million Euro. Whereas the city of Rotterdam paid 3 Million Euro, City of The Hague contributed with 500'000 Euro. There is public commitment to invest more in this IQ fund. The goal is to have a 100 Million Euro strong fund in some years (Interview van Geelen).

#### Knowledge infrastructure

To compensate for the lack of tertiary educational organizations, the city hall seized the opportunity when the neighboring Leiden University was searching for ways to counter the declining number of students (de Vries 2008, 58). To increase the attractiveness of their programs and its international visibility, Leiden University as the oldest university in the Netherlands wanted to tap into the international profile of The Hague. With substantial support of the City of The Hague, the Campus The Hague Leiden University opened its doors in 2010 (Interview Genet and van der Klaauw). The *Campus The Hague* is now one of seven faculties of Leiden University. Programs that match the economic profile of The Hague were transferred to this new campus including public administration, terrorism and counterterrorism, and international legal studies. By providing education for over 1000 students it is so far a success story for both the City of The Hague and Leiden University (Interview J. de Vries).

The City of The Hague also fosters inter-university cooperation in the South Wing of the Randstad. Vague ideas circulated to merge the big three regional universities – Delft University of Technology, Leiden University and Erasmus University Rotterdam –to a highly competitive international university. These ideas have never been pushed forward. However, efforts for ‘soft cooperation’ (Interview J. de Vries) has resulted so far in the establishment of an inter-university center to apply ‘big data’ research for urban issues called BOLD (standing for Big, Open and Linked Data). In such inter-university cooperation, The Hague is positioning itself as a ‘local and neutral ground’ in which the three universities could connect (Interview Shimshon). The efforts to link the extra-university knowledge institutes and think tanks by for example leveraging the The Hague Academic Coalition (HAC) never gained momentum. In any case, the City of The Hague is very much interested in further strengthening its knowledge infrastructure (Interview Genet and van der Klaauw).

### Testing expectation 1.1

*E 1.1: A moderately developed RIS enables the formulation of innovation policies.*

Expectation 1.1 cannot be supported. It seems that the direction of causality is reversed. Innovation policies in The Hague are formulated rather independently from the RIS but they are aiming at the very weakness of the RIS such as overcoming fragmentation in some clusters and developing the knowledge infrastructure.

The following interview statement describes the standard procedure when formulating economic strategies in The Hague.

“When we are formulating strategies, we first look at the DNA of The Hague. That means we first analyze which firms are actually present. We are then trying to find the economic niche within a sector in which The Hague has a comparative advantage. We are willing to spend money in promising niches and priorities them. Then we facilitate talks and interaction between the companies so that they can find common ground. Then we search for matching knowledge institutions. We always going for the ‘triple helix’ ”(Interview Oliver).

The statement highlights how innovation policies deliberately target RIS weaknesses and opportunities ensuing from the RIS. The discussion of expectation 1.2 develops this insight further.

### Testing expectation 1.2

#### *E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS*

Expectation 1.2 can be supported. A lot of interviewees point to the causality between the innovation policies and specific RIS failures. Three types of innovation policies focus on modifying and transforming the RIS. (1) The stimulation of crossovers between existing clusters, (2) the enlarging of the knowledge pool and the (3) compensation for the lack of venture capital by providing public funds. The first type tackles RIS fragmentation, the second organizational thinness and the third the absence of an important innovation feature.

A lot of interview partners emphasize the importance of fostering interaction within crucial actors in the RIS, i.e. the so-called ‘triple helix’. Astonishingly, some interview partners were aware of the actual academic concept and mentioned it to us. Furthermore, the stimulation of cluster crossovers is a new innovation policy as two economic development officials explain: “It is not always useful to stick to the cluster approach. Crossover of clusters seem now more promising for us in triggering innovation” (Interview van Vondel and M. de Vries). Especially potential crossovers between the fast-growing security cluster and the prestigious international organizations are examined (Interview Genet and van der Klaauw). The intention is to capitalize on The Hague’s position as the seat of international organizations and, at the same time, to become somewhat less dependent on these organizations since substantial growth in this area is not expected (Meijers et al. 2014, 97). More crossovers could be established between security firms and the telecom & IT cluster by aiming to create a ‘smart city’ (Interview Oliver). This interview data indicate that city officials are aware of their RIS shortcomings and that they formulate innovation policies to transform and modify these shortcomings.

The second stream of innovation policies tackle the organizational thinness of the knowledge generation and diffusion subsystem. The efforts of adding tertiary education institutions to the

knowledge infrastructure, such as The Campus The Hague Leiden University, are strategic moves to overcome the constraining lack of knowledge institutions and to better prepare the city for the increasingly knowledge-intensive interurban competition. Another example is the HSD that is not interested in linking purchasers and vendors but to build up a knowledge pool: “We are not luring sales offices to us in the HSD. Not the number of cyber security companies that are moving to our region is the relevant criteria for us, but to attract R&D into our region (Interview de Bruijnen).

Finally, the City of The Hague and the Province of South Holland try to compensate for the lack of venture capital funding by providing own public venture capital funds. Whereas the fund of The Hague is rather small and oriented towards start-ups, the fund of the *IQ* has a substantially larger volume and tries to invest with a longer time frame and rather larger sums. The *IQ* fund was deliberately established to compensate for the lack of venture capital (Interviews: Kok and Krol, van Geelen).

### 7.2.2. Image building

To present itself as the city of peace and justice is a very prestigious and powerful image. To accompany such a branding strategy, The Hague tries to position itself as an international business town by mainly relying on the emerging (cyber) security sector.

The Hague’s image building underwent several transformations over the last twenty years. Besides being traditionally referred to as ‘The Residence’, the City of The Hague has adopted several different brands. It once labelled itself as the ‘World City by the Sea’, but this expression has not left much traces. Later, The Hague was quick in adopting the famous quote of the then UN Secretary General Boutros Boutros-Ghali. He called The Hague in 1997 ‘the legal capital of the world’ at the inauguration process of the International Criminal Tribunal for the former Yugoslavia. The City of The Hague translated this quote into an agenda for developing The Hague as an international city of Law, Peace and Security (de Vries 2008, 57). This agenda established the brand ‘International City of Peace, Justice and Security’ – a brand that was supposed to last. However, the brand was considered to be too long (Meijers et al. 2014, 97) and/or security was negatively connoted whereas peace and justice are positive keywords (Interview Shimson). Whatever the exact reason(s) were, the word security got excluded which resulted in the brand ‘The International City of Peace and Justice’. The City of The Hague even included the words peace (*vrede*) and justice (*echt*) in its city seal which needed the approval of the Dutch king (Interview van Loon; Meijers et al. 2014, 97). Today, this brand is well established (Interviews: Sanders, van Loon).

The international organizations are perceived as the source of the city's prestige (Meijers et al. 2014, 97). The city established a Municipal Department of International Affairs (*Bureau Internationale Zaken*). Among other efforts, this municipal department takes over the promotion activities of some international organizations especially when they do not have an own communication department (Interview van Loon).

Whereas the brand 'The International City of Peace and Justice' is mainly directed towards international organizations, The Hague aims to formulate an image building strategy that should address the international business community. Activities in that regard started in the early 2000s. The idea was to build on the image of the national and international government city and to gradually develop towards an international business city (Interview van Vondel and M. de Vries). Today, especially the HSD and the buzz around (cyber) security is actively marketed. The topic of cyber security fits the existing 'Peace and Justice' image and has the potential to address the international business sector. Hence, The Hague pursues a two-dimensional image building strategy stemming from being a government city. Interestingly The Hague does purely target the international level and does not invest in strategies to promote its status as the Dutch political center.

### Testing expectation 2

*E2: A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.*

Expectation 2 can be supported. The strong international sector, developed for more than a century, provides The Hague with the prestigious image of the International City of Peace and Justice. The emerging security sector enables to establish a two-dimensional image building strategy. Only with the development of a strong (cyber) security sector, The Hague could position itself as a place for business. This sector plays a dominant role in the 'business-town' image building strategy because it is a thriving and international competitive sector (Interviews: Oliver, van Ommeren and Wijnen), has thus a clear link to the international business community (Interviews: de Bruijnen, Oliver) and nevertheless features some links to The Hague's international organizations (Interviews: de Bruijnen, Oliver). Thus, the case of The Hague shows that a 'business-town' image building strategy ideally needs to be backed up by a well-developed RIS or at least by thriving and international visible sectors.

### 7.2.3. Business prerequisites

Local governments in the Netherlands do not enjoy much autonomy. As a consequence, their competences to alter business prerequisites are limited. Especially the restricted local tax autonomy constraints to formulate tax strategies because corporate and personal income taxes are collected on the national level. The local level is only allowed to levy taxes on real estate (OZB).<sup>41</sup> Given that the land and real estate are the most important local tax base, the provision of land and real estate is of crucial importance.

### Taxes

The average annual real estate tax in the Netherlands for residential property is about 0.09% of the officially estimated real estate market value and 0.3% of the value of non-residential property such as business premises, shops or offices (Bos 2013, 45). In 2016, the real estate tax in The Hague amounted to 0.0677% for residential real estate owners, 0.2445% for non-residential real estate owners, and 0.2063% for non-residential real estate users (City of The Hague 2016). These tax rates are determined each year by the Town Council (Allers and Vermeulen 2014, 5). However, a national tax reform capped the property tax rate in 2006 and forbade the taxation of residential real estate users. This tax reform aims to stop ever increasing real estate tax rates that seem to be caused by the constrained availability of local tax bases.

As an instrument to support entrepreneurs, the City of The Hague waves the real estate tax for start-ups for a maximum period of five years. This move is expected to benefit up to 1.500 entrepreneurs. The Hague was in 2012 the first Dutch municipality that implemented such a tax waiving policy (Shaw 2012).

### Provision of land and real estate

The city The Hague is active in providing and facilitating the construction and maintenance of modern real estate. The Hague in partnership with a Dutch real estate investor invested much in a new business district near the train station van NOI. As the iconic center of the business park, a modern world trade center opened in 2012. The City of The Hague actively helps companies and international organizations to find suitable facilities (van Loon). When it concerns the real estate needs of international organizations, the national government and the Municipal Department of International Affairs closely cooperate in organizing suitable real estate (Interviews: Genet and van

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<sup>41</sup> In addition, taxes are levied on tourists, dogs and the use of public space by bars, restaurants or shops (Bos 2013, 45).

der Klauww, Janssen, Oliver, van Loon). The city is assessed as ready and quick in providing suitable facilities (Interview Janssen).

### Testing expectation 3

*E3: Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.*

Expectation 3 is supported. Generally, Dutch municipalities are busy enhancing the value of their local property tax bases by constructing, upgrading and maintaining modern infrastructure. Local officials' state that the Dutch tax system causes a focus on the physical infrastructure of a locality: "The Dutch municipalities are largely focusing on developing its physical infrastructure (...) It can be explained with the locally raised real estate taxes" (Interview Genet and van der Klaauw). An expert mentioned in a somewhat sarcastic manner that building real estate and business infrastructure "is all that local governments do in the Netherlands" (Interview Meijers). On the downside of these efforts, the Dutch business real estate market produced around 18% of property vacancies in 2011- the highest in Europe (Seebus 2012). The Hague had in 2014 a non-residential vacancy rate of 13.8% (NL Real Estate 2015).

#### 7.2.4. Acquisition

Acquisition of firms is mainly the task of the regional economic development agency West Holland Foreign Investment Agency (WFIA) that operates with a cluster approach. Regarding the acquisition of international organizations, the City of The Hague is a junior partner of the Dutch Ministry of Foreign Affairs.

#### Acquisition of firms

The WFIA is a partnership of the municipalities The Hague, Leiden, Delft, Zoetermeer, Langsingerland, Haaglanden, and the Chamber of Commerce The Hague with the goal to attract international firms and investments (Interviews: van Vondel and M. de Vries, Kok and Krol). The WFIA operates with standard acquisition instruments such as going to trade fairs, acquiring via brokers but is as well the point of contact for practical tasks such as visa applications, school enrollment, or searching for real estate (Interview Kok and Krol). The WFIA is part of the Netherlands Foreign Investment Agency (NFIA) – a national network of regional economic development agencies. For example, the agglomeration of Rotterdam has its own agency – the

Rotterdam Foreign Investment Agency (RFIA) which competes with the WFIA in attracting firms (Interviews: van Vondel and M. de Vries, Kok and Krol; van der Linden). The Province of South Holland tried to consolidate the two investment agencies in its own economic development agency IQ, but The Hague and Rotterdam resisted to consolidate (Interview: van Vondel and M. de Vries, Kok and Krol, van Geelen).

#### Acquisition of international organizations

For a long time, The Hague was competing with other European cities such as Brussels, Geneva and Vienna in attracting international organizations (Meijers et al. 2014, 97; Groen 2014). Recently, big cities in Africa, in Eastern Europe and increasingly in Asia (such as the globally connected cities of Dubai, Singapore and Seoul) have become attractive for international organizations not at least because of the desire to fairly distribute international organizations worldwide (Manninen 2008; Groen 2014; Interviews: Groen, Janssen, van Loon).

The Netherlands implemented the first interdepartmental structures for the acquisition, care and maintenance of international organizations in 1988 after the European Court and the Human Rights Court have been established outside the Netherlands (van der Wusten 2006, 262). The first successful bid in which these new interdepartmental structures took the lead was during the acquisition of the Organization for the Prohibition of Chemical Weapons (OPWC) which was founded in 1997 (Groen 2014). The City of The Hague assisted the central government financially and practically in its campaign (Groen 2014). The acquisition of The High Commissioner of National Minorities, the International Criminal Court of Former Yugoslavia, International Criminal Court, Europol and Eurojust followed in the next years is described by Lagerwaard (2005) as the 'renaissance' of The Hague.

Since 2002 the Ministry of Foreign Affairs maintains permanent structures for the acquisition and support of international organizations (van der Wusten 2006, 262) and since 2005 a coordinating governmental entity called Steering Group Netherlands Host Country exists (*Stuurgroep Nederland Gastland*) (Meijers et al. 2014, 96). The Ministry of Foreign Affairs formulates the general acquisition strategy and decides on a case-by-case basis for which international organizations it wants to place a bid. The central government contributes most of the funds (e.g. the rent of real estate) and has room to maneuver to customize specific arrangements for a bid. In its essence, bidding and negotiations with international organizations is a diplomatic task (Interview Janssen). Thus, the Municipal Department of International Affairs joins in a later stage (Interview Janssen). The city hall mainly helps in solving practical problems such as logistics and the provision of facilities (Interviews: Janssen, van Loon). The Municipal Department of International Affairs is assessed as

on top of their tasks and very supportive (Interview Janssen). Sometimes the city is a bit impatient as it is not used to the slow processes of international relations (Interviews: Janssen, van Loon).

Whereas The Hague's competences in attracting international organizations is limited, it actively acquires NGOs that may profit from the spatial proximity to international organizations (van der Wusten 2006, 260). As an important asset, the city manages an office building for NGOs within the 'international zone' (Interviews: van Loon, Oliver). The city The Hague also runs the 'The Hague International Center' which facilitates administrative tasks for international organizations, international businesses and their staff such as residential registration or health care and insurances consultations.

#### Testing expectation 4

*E4: A moderately developed RIS enables the adaptation of a profound and large-scale acquisition strategy.*

Expectation 4 is partly supported. The RIS and more specifically the clusters are important to explain the acquisition strategies. However, low local tax autonomy constrains the acquisitions strategies that are for example based on tax deals.

Regarding attracting international organizations and NGOs, the main advantage is the existing international cluster in The Hague as well as the capital city function (Decisio 2011; Meijers et al. 2014, 96). For example, the "cluster of judicial organisations was a strategic asset in the acquisition of Europol, the International Criminal Court and Eurojust" (Meijers et al. 2014, 96). Another example, the NATO concentrates all its activities in the field of information technology, digital security of private networks and missile defense in The Hague. International organizations such as Europol and Eurojust alongside with the emerging specialized cyber security cluster was an important asset in attracting the NATO presence. (Interviews: de Bruijnen, Kok and Kol, HSD 2014).

Regarding acquisitions of firms, all economic development agencies – WFIA, RFIA, and IQ – apply a cluster focus (Interview Kok and Krol). This means that firms are targeted "that already have a strong foothold in The Hague: energy, telecom, business services and particularly the security cluster" (Meijers et al. 2014, 97). An alternative explanation of the strong influence of clusters in acquisition may be that cluster policies are the central economic development paradigm of the Dutch government that has diffused from the national level to lower-tier Dutch governments (see subchapter 7.2.1). Given that Dutch local governments have a low local tax autonomy, the clusters may become the main argument of local government and their economic development agencies in attracting new firms. Thus, the profound and large-scale acquisition

strategy is enabled by well-developed clusters but low local tax autonomy simultaneously constrains other acquisition strategies such as tax deals.

#### 7.2.5. Coordination

The City of The Hague coordinates some locational policies on the coordination platform MRTTH which is an organization mainly pushed forward by The Hague and Rotterdam. The establishment of the MRTTH triggered conflicts between the two cities and the Province of South Holland about the appropriate scale and governmental level that should be responsible for formulating locational policies.

Until its termination at the end of 2014, the City-Region Haaglanden served as the coordination platform for environmental issues, economic development policies and spatial planning in the FUA The Hague. However, the City of The Hague was not very active in the City-Region Haaglanden as it mostly formulated and pursued their locational policies autonomously. For example, it took a long time until The Hague started to join forces with other municipalities in the FUA to coordinate the efforts regarding hosting international organizations and providing specialized services to its international staff (Meijers et al. 2014, 100).

On the regional level, the MRTTH is a powerful player in policy fields of public transportation and economic development. For example, the Dutch government redirected parts of its transportation funds from the province to the metropolitan area (Interview Nijhof and Vokurka; Meijers et al. 2014, 93). The national government supports the MRTTH because it favors the strengthening of the international competitiveness of cities or city-regions (Interview van der Linden). This increases the leverage of the MRTTH and weakens the position of the province. Obviously, this leads to conflicts between the Province of South Holland and the MRTTH. Another potential source of conflict is the presence of three economic development agencies, namely The Hague's WFIA, Rotterdam's RFIA and the provincial IQ. The idea of the province was to create a holistic economic development agency that should be responsible for innovation policies as well as acquisition of companies and investments (Interview Kok and Krol). However, the cities of The Hague and Rotterdam refrained from coordinating with the province but they also do not coordinate their own acquisition strategies (see also subchapter 7.2.4).

#### Testing expectation 5.1

*E5.1: Low institutional fragmentation and low local tax autonomy enable regional coordination.*

Expectation 5.1 can be partly supported. Low local tax autonomy plus low vertical institutional fragmentation enables the coordination efforts in the MRTH. An alternative explanation, coordination may be enabled by the polycentric structure of the Randstad area that provides opportunities to ‘borrow size’.

Three reasons may explain the success of coordination on the metropolitan level between Rotterdam and The Hague. First, all municipalities that cooperate within the MRTH belong to the Province of South Holland. The establishment of the MRTH was a strategic move from Rotterdam and The Hague to gain more autonomy from the Province of South Holland (Interviews: Meijers, Schuttenbeld). The economic development director of the MRTH explains the intention: “We have to redefine the relationship with the province. The hierarchical structure of the three state levels does not match the realities anymore” (Interview Nijhof and Nijhof). Indeed, the provinces are the least powerful of all three state levels in the Netherlands and the major Dutch cities “often view the provinces as unwelcome representatives of the smaller municipalities that surround them” (Andeweg and Irwin 2014, 212–13). As a consequence, the MRTH is an initiative of the two big cities with noticeable less political commitment from the mayors of the smaller municipalities (Meijers, Hollander, and Hoogerbrugge 2012, 18).

Secondly, low local tax autonomy helps to build partnerships in economic development policies. The two big cities are not seeing each other primarily as competitors but rather as complementary parts (Interview van Loon). However, the two cities still compete in acquiring firms because they can levy property taxes on land and buildings and job creation is the main economic development rationale of Dutch municipalities. However, compared to other cases with high local tax autonomy, the competition is transparent, based on mostly complementary clusters of firms. In addition, there is even a gentlemen agreement that forbids poaching (Interviews: Oliver, van Vondel and M. de Vries, Vorkurka and Nijhof).

And finally, the polycentric setting of the Randstad makes coordination very attractive because it provides ample opportunities to ‘borrow size’ (Burger et al. 2015). The FUA The Hague is not functionally independent as it does not have a labor market or knowledge institutions of its own (Interview Meijers). Yet, this observation is probably true for all cities in the Randstad (Interview Meijers). Interestingly, regarding the MRTH, is that The Hague and Rotterdam feature complementary economic sectors which offers potential coordinating locational policies: “Complementarity is considered to be more efficient and more competitive, since it leads to diversity and avoids the duplication of services (...) The diversity in the region offers opportunities

for spin-offs between different economic sectors.” (Meijers, Hollander, and Hoogerbrugge 2012, 14). Only together with other cities in the Randstad, The Hague is able to provide sufficient critical mass to support a wide range of metropolitan functions and to be competitive in the international economic scale (Meijers et al. 2014, 98–99).

### Testing expectation 5.2

*E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.*

Expectation 5.2 is not supported. The Hague is only constrained in its MLG setting with regard to its low local tax autonomy. Coordination is not able to overcome low local tax autonomy. As any other Dutch municipality, The Hague has to accept these tax constraints and find ways to formulate locational policies in areas in which its autonomy is not restricted. An example would be the concentration on cluster policies in acquisition because The Hague has not ability to offer tax deals.

### 7.2.6. Public funds and compensation payments

Local governments in the Netherlands are dependent on inter-governmental money transfers. These transfers constitute an important budgetary item of any Dutch local government (see subchapter 7.1.4). In addition to these money transfers, the City of The Hague is active in attracting Dutch central government funds as well as EU funds. The central government pays no compensation for capital city related costs or capital city related lost income.

Important for the city are various Dutch central government funds and EU funds. In 2015, 63% of the municipal budget (about 1.585 billion Euros) in The Hague consists of public funds City of (City of The Hague 2014f, 242–44). The City of The Hague runs a desk that is specialized for tapping into various funds (Interview van Vondel and M. de Vries). For example, The Hague is trying to tap into Dutch public funds via the top sectors cluster programs of the Dutch Ministry of Economic Affairs (see also subchapter 7.2.1). The Ministry of Economic Affairs stated requirements to be eligible for funding. With regard to cyber securities governmental funding was justified because “[f]urther growth in security must come through interaction between the business community, knowledge institutions and government. The Hague region is seen as a breeding ground for innovation in security and has a track record in cooperation in the triple helix” (The Hague Security Delta 2011). This is an example of the strong conditionalities that come along with Dutch public funds. Thus, the HSD is not only an innovation hub, but also an example of how an organization may also serve as a tool to tap into various governmental funds.

The Hague also tries to attract European public funds. For example, the Center for Innovation, Leiden University, Campus The Hague gets funding from the EU regional fund. Horizon 2020 is also a target for city officials as they are active in partnering with knowledge institutions related to The Hague competencies in peace, justice and security (Interview Genet and van der Klaauw). Another idea is to get EU funds by focusing on big societal problems that may be partially solved with new digital technologies (Interview Shimson).

The central government pays no compensation for capital city related costs or capital city related lost income. Yet most of the capital city related costs are directly carried out or directly paid by the central government. An example are the security costs for state visits or events of the royal families. Only in some instances would the Dutch government compensate the local police in The Hague for extra services (Interviews: van Hillen, van Loon). No interview partner was aware of extra funding for culture activities or for the loss of real estate taxes. Furthermore the central government does not account for payments in lieu of property taxes.

#### Testing expectation 6

*I: Low local tax autonomy enables to ask for public funds.*

*II: No capital city specific constraints constrain to ask for compensation payments.*

Both E6 expectations can be supported. First of all, low local tax autonomy requires The Hague to focus on attracting public fund and compensation payments. Secondly, the local autonomy is not constrained because of its capital city status. As a consequence, The Hague has no argument in hand to ask for compensation because of its capital city status.

As in all Dutch local governments the local tax autonomy of The Hague is low. As a consequence, public funds and intergovernmental transfers are important to sustain the local budget. This may explain why The Hague is very active and strategic about tapping into public funds. For example, the city has established an own specialized desk for attracting public funds. Furthermore, the focus on cyber security can also be explained by the availability of funds from the Ministry of Economic Affairs (Interview Genet and van der Klaauw). Other economic sectors in The Hague do not comply with the Dutch top sector program. Only by focusing on cyber security national governmental economic development funds have started to flow into The Hague (Interview van Ommeren and Wijnen).

Given the importance of public funds and the established structures to tap into public funds, it seems at first sight astonishing that The Hague is not pursuing strategies to get compensation based

on its capital city status. However, security costs are directly paid by the central government and The Hague does not face many constraints following from the capital city status. Tax exempted property of ministries or embassies diminish the property tax base, but it seems that The Hague is satisfied that the central government accounts for a lot of direct and indirect jobs. The importance of these jobs outweigh the lost property taxes by far.

7.3. Explaining locational policies in The Hague

In this subchapter, I will first summarize the manifestations of locational policies in order to depict the locational policies agenda of The Hague (see Table 33). In the following, I will discuss the tested expectations (see Table 34) and try to connect them in order understand the interdependencies in formulating locational policies.

Table 33: Locational policies agenda of The Hague

<b>Locational policies</b>	<b>Manifestations of locational policies</b>
Innovation policies	<ul style="list-style-type: none"> <li>- Focus on cluster policies, cyber (security) as most promising cluster, search for cluster crossovers</li> <li>- Sparse knowledge infrastructure, The Hague as a neutral ground for inter-university cooperation</li> <li>- Public funds as a compensation for lack of venture capital</li> </ul>
Image building	<ul style="list-style-type: none"> <li>- The International City of Peace and Justice</li> <li>- International business town, mainly by promoting (cyber) security</li> </ul>
Business prerequisites	<ul style="list-style-type: none"> <li>- Focus on developing and maintaining modern infrastructure</li> </ul>
Acquisition	<ul style="list-style-type: none"> <li>- The city is junior partner in acquiring international organizations</li> <li>- Acquisitions are based on a cluster approach</li> </ul>
Coordination	<ul style="list-style-type: none"> <li>- Coordination between The Hague and Rotterdam in the MRTH</li> <li>- Still regional competition in the acquisition of firms</li> </ul>
Public funds and compensation payments	<ul style="list-style-type: none"> <li>- Importance of Dutch central government funds</li> <li>- No compensation for capital city related costs or capital city related lost income</li> </ul>
Locational policies agenda	<ul style="list-style-type: none"> <li>- Positioning as international government city and an international business city</li> <li>- Focus on cluster policies in cyber security</li> <li>- Focus on real estate development</li> <li>- Importance of Dutch central government funds</li> </ul>

The Hague tries to position itself towards an international business city while still leveraging its standing as the ‘International City of Peace and Justice’. The emerging sector of (cyber) security is the crucial cornerstone in this transformation. (Cyber) security capitalizes from the presence of international organizations such as Eurojust, Europol or national security organizations that are the anchors of this cluster. The transition from international organization to (cyber) security is a perfect example of the kinds of cluster crossovers that the City of The Hague is actively searching

for. The efforts around the (cyber) security sector are reflected in innovation policies, image building and as well in attracting public funds.

Given the limited local tax autonomy, The Hague is forced to formulate similar locational policies as other Dutch municipalities such as real estate development and attracting public funds. The importance of property tax is the only important locally raised tax which creates incentives to invest in the development of modern infrastructure. The constraints in the local tax autonomy are compensated by vertical money-transfer from the Dutch central government. Vertical money transfers make up 64% of The Hague's local revenue. Given the importance of these funds to sustain the local budget, the conditionalities brought along by these public funds may explain the diffusion of economic development paradigms from the central level to local governments. Examples are the concept of clusters or 'triple helix' that have been put forward by a lot of interview partner when talking about economic development (Interviews: Adhargabal, de Bruinen, Krol and Kok, Oliver, Schuttenbeld). In a setting with limited local tax autonomy, these conditionalities are a strong policy diffusion mechanism.

Table 34: Expectation testing The Hague

<b>Expectations</b>	<b>Expectation testing</b>	<b>Specifications</b>
E1.1: A moderately developed RIS enables the formulation of innovation policies.	Not supported	- Reversed causality
E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported	-
E2: A moderately developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported	- Clusters, not whole RIS, are important in image building
E3: Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.	Supported	-
E4: A moderately developed RIS enables the adaption of a profound and large-scale acquisition strategy.	Partly supported	- Clusters, not whole RIS, are important in acquisition - Acquisition based on tax deals is constrained by low local tax autonomy
E5.1: Low institutional fragmentation and low local tax autonomy enable regional coordination.	Partly supported	- Polycentric Randstad region provides opportunities to 'borrow size'
E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported	- Coordination is not able to overcome the constrained local tax autonomy

E6:		
<i>I</i> : Low local tax autonomy enables to ask for public funds.	Supported	-
<i>II</i> : No capital city specific constraints constrains to ask for compensation payments.	Supported	

Table 34 summarizes the tested expectations in the case of The Hague. In the following paragraph, I discuss the expectation stemming from the RIS as an explanatory variable whereas in the next paragraph I discuss the expectations stemming from the MLG setting. The causality of expectation 1.1 is reversed. Innovation policies are not restricted by the development of the RIS but innovation policies, in fact, try to develop the RIS. Thus, innovation policies are used to modify/transform RIS failures, i.e. fragmentation within the clusters and the organizational thinness of the knowledge infrastructure (E1.2). The testing of expectations E2 and E4 reveals that rather the clusters than the RIS in its totality explain image building and acquisition. Especially the internationally competitive clusters (international organizations and (cyber) security) are leveraged in these two outward-oriented locational policies.

Low local tax autonomy, i.e. property tax as the only important locally raised tax, incentives developments of land and real estate (E3). Because of low local tax autonomy, the competition between jurisdictions is moderate and mostly about attracting jobs. Low local tax autonomy is one reasons that enables regional coordination between Rotterdam and The Hague (E5.1). Coordination is furthermore enabled by the absence of vertical institutional fragmentation and the polycentric urban structure in the Randstad. However, coordination is not able to overcome low local tax autonomy as postulated in expectation 5.2. Low local tax autonomy enables the city hall to ask for public funds (E6). The absence of capital city specific local autonomy restrictions constrains The Hague to ask for compensation payments.

#### 7.4. Conclusion

Generally, The Hague is very active in formulating locational policies. The local government in The Hague is interpreting its role proactively. The municipal Ministry of Economic Affairs claims that it operates almost like a private business (Interview Oliver). The overall aim of the locational policies agenda is to become an international business city while still leveraging the ‘International City of Peace and Justices’-image. As a consequence, locational policies mainly target the cluster of international organizations and the emerging (cyber) security sector whereas the other three economic sectors gets fewer attention from city hall.

Restricted local tax autonomy has three important consequences for the locational policies agenda of The Hague. Firstly, it constrains certain locational policies and enables other locational policies.

For example, The Hague is restricted in the business prerequisites category by its limited tax autonomy. As alternatives, the City of The Hague concentrates on the provision of suitable real estate and on attracting of public funds. Secondly, the locational policies agenda operates based on an avoiding spending logic in contrast to other SCCs that operate with an increasing income logic. More precisely, Dutch local governments are incentivized to avoid social assistance spending because they have to fund excess spending from their own budgets but can use the surpluses for other policy areas. To avoid excess spending, the locational policies of The Hague try to indirectly or directly create jobs. Finally, the central government exerts influence on locational policies formulation by public funds that come along with strings attached, i.e. conditionalities. These public funds constitute an important budgetary item for local governments and thus the conditionalities of these funds are strong steering mechanism.

## 8. Washington D.C.

Washington D.C. (DC)<sup>42</sup> represents a unique case in the urban system of the US because of its constitutional status and its many capital city specific constraints. The US Constitution gives Congress in the so-called ‘District Clause’ full authority over the national capital city “to exercise exclusive Legislation in all Cases whatsoever, over such District” (Article 1, section 8, clause 17). DC is by intention neither a state nor a city within a state. As a consequence, DC does not have representation in the legislative branch. But DC bears responsibilities of a state as well as those of a county, a city, and a school district, yet it does not have the authority to raise revenue in the way all other states can (Ghandi et al. 2009, 265; more in subchapter 8.1.4). The political science literature about DC is, thus, mostly concerned with examining the local autonomy constraints and their fiscal and political consequences (e.g. Harris 1995; O’Cleireacain 1997).

Table 35 summarizes the case study of DC. I find that the locational policies agenda in DC aims at fostering innovation policies in the medical and the digital high-tech sector and creating an image and an acquisition strategy that leverages both the capital city status and its innovative sectors. Furthermore, DC concentrates on large real estate projects as well as place-based neighborhood development and constantly asks for federal compensation for its capital city specific constraints.

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<sup>42</sup> Formally, Washington, D.C. is named the District of Columbia. In the following, I abbreviate Washington, D.C. to DC or the district.

Table 35: Expectations and findings of the case study Washington, D.C.

Nr.	Explanatory factor	Phenomenon to be explained	Expectation	Result
E1	RIS - highly developed	Innovation policies	A highly developed RIS enables the formulation of innovation policies.	Not supported
E1.2	RIS - RIS failure(s): lock-in	Innovation policies	Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported
E2	RIS - highly developed	Image building	A highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported
E3	MLG setting - High local tax autonomy	Business prerequisites	High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.	Not supported
E4	RIS - highly developed	Acquisition	A highly developed RIS enables the adaptation of a profound and large-scale acquisition strategy.	Partly supported
E5.1	MLG setting - high institutional fragmentation - high local tax autonomy	Regional coordination	High institutional fragmentation and high local tax autonomy constrain regional coordination.	Supported
E5.2	MLG setting - Capital city specific constraints - Institutional fragmentation in the FUA	Coordination	Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported
E6	MLG setting - High local tax autonomy - Capital city specific constraints	Public funds and compensation payments	<i>I:</i> High local tax autonomy constrains to ask for public funds. <i>II:</i> Capital city specific constraints enable to ask compensation payments.	Supported Supported

The remainder of this case study chapter is structured into four subchapters. The first subchapter gives a general description of DC as well as discusses the manifestations of the explanatory factors. The second subchapter addresses the different locational policies categories and tests the respective expectation(s) one step at a time. The third subchapter links the different locational policies to a locational policies agenda and discusses the results in an integrative manner. The last subchapter concludes the case study.

## 8.1. Profile of Washington, D.C.

### 8.1.1. History

The establishment of a new permanent US capital city under federal authority is a product of the US Constitution that came into force in 1789. James Madison elaborated in *The Federalist Papers*, no. 43 (Hamilton, Madison, and Jay 1982, 217–25) that in order to ensure the independence from any city, state or commercial interest the US capital should be under exclusive authority of Congress. For the same reason the size of the city should be limited that it allows only hosting all necessary federal government functions and to serve as a symbolic national city. This size limit should prevent that the new capital become a cultural, social or economic powerhouse (Gilliland 2013, 31). Madison's main fear was an encroachment of the federal government by any state. However, he did not envisage problems for local residents living under Congressional authority because they can elect their own local government (Hamilton, Madison, and Jay 1982, 218; Nagel 2013a, 63).

The US constitution does not specify a location of the district. Gilliland (2013) argues that the decision to move the US capital southwestwards was a compromise comprising of the Northern States succeeded in having their war debts nationalized, while the debt-free Southerners liberated the capital from the influence of Pennsylvanian Northerners.<sup>43</sup> Finally, it was President George Washington who had the right to decide the exact location of the new federal capital and he chose an area close to his own home which was located at Mount Vernon, Virginia (Hazelton Jr 1914, 7; Gilliland 2013, 35). Engstrom, Hammond, and Scott (2013) computed that this rather remote location was about 60 miles away from the US population centroid at that time and thus met the Madisonian principle of equal representation of citizens, i.e. the location was close to ensure equal access of US citizens to the capital.<sup>44</sup>

DC was founded in 1791 and was initiated as the US capital in 1800. At this time, DC had a population of 14'103 inhabitants (Ghandi et al. 2009, 266). In the 19<sup>th</sup> century, DC was a poorly developed city with no paved roads, hardly any street lighting and no sewage system. The district

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<sup>43</sup> See Gilligan (2013, 34-35) for a discussion of a number of other raised explanations why the new capital city was established at the Potomac River.

<sup>44</sup> Engström et al. (2013) found that the Madisonian principle of equal representation of citizens also hold true regarding US state capitals. Decision-makers tend to locate and especially relocate the seat of government as near as possible to the population centroid of the relevant jurisdiction.

certainly did not meet the standards of a capital city compared with European counterparts. As a reaction, some Congressmen intended to relocate the capital city to a better developed US city (Ghandi et al. 2009, 266). To counter such relocation endeavours and to develop the infrastructure of the district, President Ulysses S. Grant appointed in 1871 a new territorial government instead of the locally elected governing structure. This territorial government was tasked with developing the district. However, these infrastructure updates costed US\$ 20 Million – more than US\$ 1.5 billion in today's prices – which led to the abolishment of the territorial government. To have a better control over expenses the US president appointed three temporary commissioners and a subordinated military engineer to run the district. This top-down appointed governance structure was institutionalized and lasted until 1973 (Ghandi et al. 2009, 266).

The District of Columbia Self-Government and Governmental Reorganization Act (or Home Rule Act) of 1973 brought some degree of self-governance to DC. The act established a local government of an elected mayor and thirteen City Council members. The district's politics, especially under the second elected mayor Marion Barry (in office from 1979-1991 and from 1995-1999), have been described as a system of patronage which led to financial woes of the district (Interviews: Clinton, Rivlin, Tregoning). Mayor Barry pushed heavily a social agenda for the poor in the district, most of whom were Afro-American. An expert assessed this social agenda “as probably needed at that time, but together with the not very professional administration this led to high spending and at the end to bankruptcy and the fiscal oversight of DC” (Interview Rivlin). Other interview partners relate these local political troubles to the immature DC local government that had to start from scratch in 1973 and which only slowly developed to a professional administration (Interviews: Clinton, Tregoning, Zhadradnik).

In 1995, US President Clinton signed a law that created a Financial Control Board and an independent Office of the Chief Financial Officer (OCFO) to deal with the financial issues of the district (Ghandi et al. 2009, 275). The Financial Control Board succeeded in reducing the payroll of the city, improving the tax collection system while trying to maintain the public services which thus modernized the local DC government (Interview Rivlin). In 1997, the National Capital Revitalization and Self-Government Improvement Act of 1997 (also called Revitalization Act) aimed to create a sustainable financial base for DC. The Revitalization Act brought a lot of changes regarding financing the district (see subchapter 8.1.4). The financial turnaround came quickly. The two federal oversight institutions managed to present the first balanced budget in 1997. This financial stabilization was certainly positively influenced by the reforms but DC also profited from a strong performing US economy at that time (Interview Rivlin). In 2001 the Financial Control

Board got dissolved after a consecutive four years of balanced budgets. The OCFO became a permanent fixture of the Districts government structure (Ghandi et al. 2009, 267).

### 8.1.2. Geography and population

DC is a rotated rectangle carved out of the states of Maryland and Virginia. In 1846, congress retroceded the entire district territory southwest of the Potomac River to the state Virginia which explains its current shape (Richards 2004). The FUA DC spans over three states (Maryland, Virginia, at the margin also to West Virginia) as well as the district as its very core. Thus, the DC region is vertically and horizontally institutionally fragmented.

DC faced a decline of residents from 1950 to 2006. This decline was severe between 1970 and 2000 as the district lost about a quarter of its population while the suburban population doubled (O’Cleireacain and Rivlin 2001, 2–3). Population losses were most drastic among middle-class families with children making seven out of ten residents African Americans (Sturtevant 2014, 280). To counter the population loss, the DC administration under mayor Anthony Williams made in 2003 “attracting 100’000 new residents to the District of Columbia over 10 years one of his primary goals” (Sturtevant 2014, 279). The administration looked to target both middle-income and high-income new residents. This strategy seemed to be successful as DC achieved a remarkable turnaround in the population dynamics. Between 2000 and 2010, the DC displayed a population surplus of nearly 30’000 people (5.2% population growth) (Sturtevant 2014, 279). “The year 2006 marked the beginning of the domestic migration turnaround, and about 900 more households moved into the District than moved out in that year. (...) The trend accelerated in the final years of the decade so that, between 2009 and 2010, nearly 5’000 more households moved into the city than moved out” (Sturtevant 2014, 280). The turnover in population dynamics has been achieved due to improvements of the school system, combating crime and place-based investments (Interviews: Khan, C. Stone, Tregoing).

Table 36 summarizes the population dynamics on different perimeters. The district accounts only for a bit more than 10% of the whole population in FUA. The suburbs beyond the limits of the district are to large parts under the jurisdiction of Virginia and to a smaller extent under the jurisdiction of Maryland. In 2015, the FUA DC was the sixth largest metropolitan region in the US following New York, Los Angeles, Chicago, Dallas and Houston (United States Census Bureau 2015a). The district’s population has grown only since 2006, whereas the FUA DC, and the states Maryland and Virginia display a rather constant population grow.

Table 36: Population on different perimeters

Scale	1980	1990	2000	2010	2015	Change (%) 1980-2015
District of Columbia	638'333	606'900	572'086	601'723	672'228	+5,04
FUA D.C.	-	4'122'914	4'796'183	5'582'170	6'097'684	+32,39 (1990-2015)
State of Maryland	4'216'975	4'781'468	5'296'647	5'773'552	6'006'401	+29,79
State of Virginia	5'346'818	6'187'358	7'079'057	8'001'024	8'382'993	+36,22
United States of America	226'545'805	248'709'873	281'424'600	308'745'538	321'418'820	+29,52

Source: United States Census Bureau (2015). This population data are estimates based on population censuses. FUA Washington, D.C. = Washington-Arlington-Alexandria (DC-VA-MD-WV Metro Area). District plus 17 counties and 6 cities. FIPS PMSA Code 8840.

“Despite the population growth and the families that moved into DC, there are two Washington, D.C.’s” (Interview Zahradnik). The income distribution peaks at highest-income earners and at the very poor (Ghandi et al. 2009, 269). In fact, the median income is US\$ 101'000 for DC’s white population and US\$ 39'000 for DC African Americans (Ruble 2016, 333). This disparity of incomes constantly challenges the district’s policy-making as it is confronted “with balancing the needs of its residents for services such as education, healthcare, transportation, housing, parks and recreation, and others” (Ghandi et al. 2009, 265). The unemployment rate in DC was 7.6 % in 2013 whereas the other jurisdictions in the FUA had an average unemployment rate of 4.3% (Downtown DC BID 2013). The districts poverty rate (19%) remained persistently high since the turn of the millennium. The poverty rate for African Americans was 26%, for Hispanics 22% and for Whites 7% in 2012 (Ghandi, Spaulding, and McDonald 2016, 177).

This disparity is also reflected in the duality of workforce. The residents in DC have the highest college debts in the whole country which points to a lot of graduates from good, i.e. expensive, universities. Furthermore, DC has the second lowest rate of college debt defaults which points to the potential of the DC region to absorb these talents (Interview Tregoning). On the other hand, DC has an equal high share of low-educate workers. Experts anticipates the integration of the low-educated workforce into the DC’s knowledge economy as a big future challenge (Interviews: Lazere, Rubble). In sum, DC is “a divided region between high income residents and low-income residents. DC still has not uniformly good schools, high unemployment rates and poverty

associated problems. Plus, is now the problem of affordable housing salient” (Interviews: Rivlin, Smith).

8.1.3. Regional Innovation System

The RIS in Washington, D.C. can be described as highly developed. Both RIS subsystems feature a high organizational thickness. Many intermediary organizations stimulate cooperative and joint activities between KIBS firms, knowledge organizations and federal agencies. Especially the clusters in (cyber) security and the health sector display intense knowledge dynamics which results into bustling and innovative clusters. In that regard, these two clusters diversified into own economic ecosystems which reduces their dependency from national governmental organizations.

Knowledge application and exploitation subsystem

The FUA DC is the fifth largest regional economy of the US in 2010<sup>45</sup> (OECD 2014b). The economy of the DC region changed from a government company town to a postindustrial powerhouse (Ruble 2016, 334–35). To a large extent, the regional economy has developed in lockstep with the development of federal expenditures (Feldman 2001, 866). This has fostered the emergence of a RIS that is specialized in the KIBS sector. The ratio between KIBS jobs and high- and medium-tech manufacturing jobs is 4 times higher in DC than in New York, however, this ratio has been put in perspective due to the low number of high-tech jobs in the DC region (see Table 37).

Table 37: Ratio between KIBS jobs and manufacturing jobs in US cities

Sector	Washington, D.C.	New York	Los Angeles	Chicago
KIBS	517'949	710'316	633'648	322'567
High-tech industry	21'353	123'111	195'111	125'272
<b>Ratio</b>	<b>24.3</b>	<b>5.8</b>	<b>3.2</b>	<b>2.6</b>

Source: United States Census Bureau (2016), data from 2012

In 1970, around two-thirds of the regional economy was directly or indirectly dependent on federal expenditures and half of the workforce was employed in the government sector (Feldman 2001, 866). Triggered through public procurement, outsourcing of federal services and knowledge

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<sup>45</sup> The top five US economic region measured by the regional GDP in 2010 are New York, Los Angeles, Chicago, San Francisco and Washington, D.C. (OECD 2014a).

spillovers from the public to the private sector, innovative clusters developed in the last 45 years which focused on technology intensive services mostly in the defense and health sector (Feldman 2001; Ceruzzi 2008). The different cluster in the DC-RIS are geographically dispersed. To describe it simply, whereas the district is basically a service town for the federal government (Interviews: Clinton, Turner), in Maryland has developed a medical cluster around the National Health Institute in Bethesda and in Virginia cluster firms that are active in the defense and security industry that are also known as the beltway bandits (Interviews: Levine, Turner; see also Ceruzzi 2008).

The district's job composition resembles the capital city function (see Table 38). Firstly, the districts employment base are federal jobs as around 28% (205'000 jobs) are directly on federal payroll (DC 2014, 31). Secondly, a large share of the private sector caters for the federal government which is indicated by the high number of jobs in the KIBS sector and the hospitality sector. Specific for the 'government town' DC are KIBS firms such as law firms, think tanks and research organizations that offer the "traditional DC practice" (Interview Turner), i.e. lobbying and consultancy. This assemblage of firms "must have a DC address on their door sign in order to be a player on the Capitol Hill" (Interview Turner). Around 91'000 jobs are associated with those kind of organizations adding up to 12% of the jobs in DC. Given the large numbers of visitors that the district welcomes every year –almost 18 million visitors in 2011, of which around 1.8 million international visitors (The District of Columbia 2012, 32) – the hospitality sectors accounts for 92'000 jobs or 12% of all DC jobs.

Table 38: Employment in DC

Sectors	Total jobs, 1997	Total jobs, 2013	Change, 1997- 2013
Federal government	192'000 31%	205'000 28%	+13'000 +7%
Local government	41'000 7%	35'000 5%	-6'000 -15%
KIBS	210'000 34%	261'000 35%	+31'000 +24%
Hospitality	65'000 11%	92'000 12%	+27'000 +42%
Education	35'000 6%	58'000 8%	+23'000 +66%
Health Care	48'000 8%	66'000 9%	+18'000 +38%
Construction	9'000 1%	14'000 2%	+5'000 +56%
Others	18'000 3%	13'000 2%	-5'000 -28%
Total	618'000 101%	744'000 101%	+126'000 +20%

Sources: Simplified illustration from DC Tax Revision Commission (2014, 31).

Note: The KIBS category consist out of the following sectors: legal, professional services, employment services, business services, information, finance, and organizations. The hospitality sector consist out following sectors: food services, accommodations, amusement & recreation, retail, and wholesale. Percentages does not add to total 100% due to rounding.

Around 70% of the jobs in the district are held by commuters from Virginia and Maryland (Ghandi et al. 2009, 268). In the suburban jurisdictions gather firms that sell and develop knowledge intensive products and services most of them to governmental organizations in the medical and defense sector. The defense sector has experienced a rapid growth since 9/11. Private expertise is needed in the knowledge intensive counter-terrorism machinery which is mostly based on cyber security and cyber intelligence. Private firms in this sector rely on high-qualified employees and spatial proximity to decision makers (Mayer 2013, 140). The cyber security cluster develop in the whole RIS and not just around the Pentagon. Examples are firms around Fort Meade in Maryland (halfway between the district and Baltimore) or the establishment of datacenters in Loudoun County and Prince William County (also in Maryland) (Interviews: Buchanan, White).

The medical cluster started around 30 years ago and is sometimes described as the 'medical belt' covering the National Health Institute (NHI) in Bethesda, the Food and Drug Administration (FDA) in Silver Spring all the way up north to the Johns Hopkins University in Baltimore

(Interview Boyer). This medical cluster diversified and got mostly independent from the NHI and the FDA, except from the federal role as a regulator (Interview Boyer).

Federal money has been decisive for the development of these clusters. Federal spending rose from around US\$ 32 billion in 1980 to US\$ 166 billion in 2008 (Greater Washington Initiative 2010). An expert, sees a direct correlation between the regions GDP and federal spending as “40 % of the region’s economy consists either of federal salaries or federal public procurement” (Interview Fuller). Policy makers in the region are in agreement that the big problem looming over the DC-RIS is the decline in federal spending that peaked in 2009 (Interviews: Bean, Loescher, Tregoning). Between 2010 and 2013 federal procurement declined by US\$ 13.3 billion or 16.1% and additionally federal employment dropped by around 22’000 jobs erasing another US\$ 2.4 billion from the region (Washington Business Journal 2015).

As a consequence, companies have started to glance around for private sector diversification (Interview Richmond and Winn). The development of the Internet is the most prominent example of the region’s ability to translate knowledge derived from federal procurement to the private sector (Mowery and Simcoe 2002; Ceruzzi 2008). Such a dual use may be successful in cyber security and health IT as both sectors are endowed with risk-taking and innovation prone agencies such as Defense Advanced Research Projects Agency, Department of Homeland Security, National Institutes of Health, National Telecommunications and Information Administration (Warland 2016c).<sup>46</sup> However, exploitation by private sector clients often takes place outside of DC. Spin-offs that have demonstrated their innovation capacity tend to get bought from external firms what suggests that the RIS in DC may not be well equipped with the appropriate environment and actors for private market growth (Warland 2016c).

#### Knowledge generation and diffusion subsystem

Educational organizations mushroom all over the region. Prestigious universities are, among others, the three George’s: Georgetown University, George Washington University, and George Mason University. But also high ranking universities from the neighboring states established a physical presence in the DC region. Best examples are Johns Hopkins University from Baltimore and Virginia Tech that is headquartered in Blacksburg. The presence of universities is enriched by a vast amount of research organizations and think tanks such as Brookings Institution or the Pew

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<sup>46</sup> The US federal government is not uniform in terms of federal procurement and the commitment to innovation differs radically across federal agencies (Warland 2016c).

Research Center as well as international governmental organizations such as the World Bank or the International Monetary Fund.

In DC there is an abundance of national sector associations that act as knowledge mediators between federal agencies and member firms (Warland 2016c). These national sector associations launch diverse programs with a focus on a wide range of innovation activities such as diversification and fostering entrepreneurship. This stimulation of knowledge interaction is furthermore enhanced by local and regional development agencies (see subchapter 8.2.1).

### RIS development

Summarizing, the RIS in DC is well developed. Especially compared to the other three RISs in this thesis, its organizational thickness, its interactions between and within the subsystems and its ability to diversify are exceptional. Both subsystems are organizationally thick and no actor category is missing. Many specialized private and public sector organizations stimulate cooperative and joint activities between KIBS firms, knowledge organizations and federal agencies, i.e. the actors of the ‘triple helix’. Knowledge interactions are dynamic in various economic clusters but mostly related to the security sector and the health sector. Whereas the RIS in its totality is without a doubt dependent on federal spending, these clusters have developed their own ecosystem gradually reducing the dependency from governmental organizations. However, observers stress the economic dependency of the region on federal spending: “There is a direct correlation between the regions GDP and federal spending” (Interview Fuller). Since federal spending peaked in 2010, the public sector dependency is an issue looming over DC (Interviews: Fuller, Loescher).

#### 8.1.4. Multilevel governance setting

The MLG setting of DC is rather complex. First, the district has to face capital city specific constraints and bears responsibility of a state as well as those of a county, a city, and a school district. Yet the district is not allowed to raise revenue in the way all other states are allowed to (Ghandi et al. 2009, 265). In no other SCC are capital city specific local autonomy constraints as intense as in DC (Boyd and Fautroy 2002; Wolman et al. 2007). Secondly, the FUA DC is institutional fragmented as it spans over three US states and the district. And finally, the business communities are well-organized with informal access points to local public leaders. The developers seem especially powerful agents in the governance of locational policies.

## Public-vertical

The current governance system of the district could be described as Home Rule under Congressional supervision (Nagel 2013a). District residents have no representation in the legislative branch of the US. They are only represented by an observant delegate in the US House of Representative who may vote in the committee without a right to vote on the floor of the House. As courtesy, the DC delegate is always allowed to serve in the Committee concerned with DC issues (Nagel 2013a, 64–65).<sup>47</sup> DC residents are allowed to participate in presidential elections since 1961 (Ghandi et al. 2009, 272).

Congressional oversight hampers profoundly the local decision-making autonomy of DC. The Congress can influence local policy-making of the district by either block the spending on particular budgetary items or directly on vetoing DC laws (Nagel 2013a, 64–65). And the Congress used this power extensively (Fauntroy 2003; Fauntroy 2009; Nagel 2013a, 71). Congressional oversight is currently a very controversial issue because the DC local government wanted to implement contested societal policies concerning abortion, Marihuana, needles exchange program and fire arms. (Interviews: Lazere, Rivlin, Smith, Tregoin, Young and Wolman). These policies are contemporary hotly debated throughout the US. The republican majority of the congress made use of its “authority over locally generated funds as a means to enact its own legislative provision through so-called ‘social riders’ (...). These ‘social riders’ specifically impact district policy but actually reflect broader political debates” (Ghandi et al. 2009, 279). Thus, the deep partisan divide in the US impacts local policy-making in DC.

Furthermore, the federal level can intervene in local matters via The National Capital Planning Commission (NCPC) that represents federal interest over federal land and buildings in the whole DC region established in 1924 (Ghandi et al. 2009, 272). The NCPC steers the development of federal land in DC and the surrounding region via the Comprehensive Plan. According to this Comprehensive Plan, the NCPC also reviews and approves the planning of DC’s local government (Interview Koster and Staudigl). However, DC’s local government is well-informed about the NCPC’s decisions and strategies because four members of the local government sit in the board of the NCPC (Interview Koster and Staudigl). One controversial issue is the height limit of buildings in DC – not more than five stories or not higher than the capitol – what makes the land in the

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<sup>47</sup> The relevant committee in the House for DC issues is the Committee on Oversight and Government Reform – Subcommittee on Health Care, District of Columbia, Census and National Archives. The relevant committee in the Senate for DC issues is the Committee on Homeland Security and Governmental Affairs - Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia (Nagel 2013a, 65).

District scarce. Thus, the limited vertical growth costs DC tax revenue (Interviews: Anonymous, Tregoning). As a consequence “DC is horizontally and vertically landlocked” (Interview Tregoning). Thus, the NCPC brings another layer of complexity to the region (Interview Khan).

The Home Rule Act of 1973 and the Revitalization Act of 1997 are important milestones in shaping the relationship between the District and the federal level. Before 1973, “the district received federal budgeted assistance that was either a lump sum payment determined by the Congress or a sum calculated by a proportion of the DC’s budget that varied between 40% to 50%” (Ghandi et al. 2009, 273). The Home Role Act implicitly acknowledged the unique fiscal role of the District and linked the local tax autonomy constraints to federal compensation payments (Ghandi et al. 2009, 274). A lump sum of US\$ 230 Million annually in 1975 was determined to compensate for the limited local tax autonomy. The lump sum increased to US\$ 660 Million annually when it was paid for the last time in 1998 (Ghandi et al. 2009, 274; 278). The financial troubles of the District in the early 1990s led to the Revitalization Act that can be described as a big compromise (Interviews: Rivlin, Zahradnik). In fact, several compromises has been reached to compensate for the different state services that DC has to carry out and for the constraints in local tax autonomy. In sum, the Revitalization Act increased the federal payments from around US\$ 660 Million to US\$ 1.3 Billion annually (Interviews: Anonymous, Rivlin, Smith).<sup>48</sup> Furthermore, a US\$ 105 Million annual special payment for federal district related costs is paid by the federal level composed of US\$ 15 Million for security and protection, US\$ 30 million tuition grant because DC has only one public university, and another US\$ 60 Million for public schools, public charter schools and school vouchers (Interviews: Anonymous, Lazere). In addition, the federal government “sometimes provide special payments to the District for burdens associated with special events, such as presidential inaugurations. However, these payments are ad hoc, often unpredictable, and unreliable” (Young 2008, 70).

Generally, US local governments enjoy a high fiscal autonomy. In 2014, US local governments raised 15.9% of all taxes (OECD 2014a). Local governments are allowed to levy personal and corporate income taxes. US states raised 20.9 % of all taxes (OECD 2014a). However, DC’s tax

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<sup>48</sup> Quantitatively most importantly are the federal Medicaid contributions that accounts for about US\$ 700 Million annually (Interview Anonymous). Normally the matching rate between the state and the federal level is 50/50. In the case of DC, the matching rate is 30/70, i.e. the federal level pays 70% of the Medicaid contributions (Interviews: Anonymous, Rivlin, Smith).

bases are severely constrained because of its capital city status and because it is not treated as state (O’Cleireacain 1997). There are two tax constraints which fiscally harms the district.<sup>49</sup>

Firstly, the Home Rule Act of 1973 prohibits DC to levy the so-called Commuter Tax on income of non-residents that work in the district. US states normally tax non-residents (Nagel 2013a, 78). This fiscally harms the District because about two thirds of the income in the capital is earned by non-residents (Ghandi et al. 2009, 279–80). O’Cleireacain (1997, 9) calculates that taxing non-residential workforce would account for about US\$ 1 billion revenue. Yilmaz (2009) calculated that taxing non-residential workforce would account for an additional US\$ 2.26 billion revenue in 2005. Thus, the employees in the district contribute to the district’s budget in the form of sales taxes but tax revenues on personal income escapes to Maryland and Virginia (O’Cleireacain 1997, 9; Ghandi et al. 2009, 286).

Secondly, federal property is tax exempted in the whole US. Unsurprisingly, this tax exemption has the most financial consequences for the DC region (Interviews: Anonymous, Lazare). Federally owned properties and others tax exempted property such as embassies make up 41% of the district’s tax base (O’Cleireacain 1997, 9). For most of the federal property, the DC government does not receive payments in lieu of taxes (Ghandi et al. 2009, 280). Yilmaz (2009) calculated that this tax loss would account for about US\$ 540 million in 2005.

In sum, the constrained local tax autonomy creates a structural income deficit which is seen as a reason for DC’s historically high taxes (Interviews: Clinton, Zahdradnik; O’Cleireacain 1997, 6–10). Or vice versa, DC features lower quality in public services than the surrounding jurisdictions (Interview Wolmann and Young). After the compromises in the Revitalization Act in 1997, the strategy of the DC local government has been to push for a relaxation of the congressional oversight instead of pointing to the structural revenue deficit (Interview Zahdradnik).

This limited local tax autonomy plus the federal compensation payments manifest itself in DC’s budget. Table 39 list the big revenues category of DC in 2013 and compares it to the average local government in the US. Roughly, DC’s budget is composed in the following manner: 28% federal governmental transfers 44% locally raised taxes and 28% charges, utility revenues and miscellaneous revenue (United States Census Bureau 2015b).

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<sup>49</sup> O’Cleireacain (1997, 155–56) highlights two more local tax autonomy constraints. First, the district is not allowed to collect taxes on the purchase or income of military personnel and foreign diplomats. Second, the federal government does not pay sales tax on purchases or personal property taxes on its equipment.

Table 39: Comparison of revenues between DC and the average US local government

Type of revenue	DC		Average US local government
	Amount (in US\$ million)	Percentage %	Percentage %
Federal governmental transfers	3'982	28.26	4.16
State governmental transfers	0	0	27.45
Property tax	1'970	13.98	25.88
Sales and gross receipt tax	1'511	10.72	5.99
Individual income tax	1'641	11.64	1.69
Corporate income tax	453	3.21	0.47
Other taxes	605	4.3	1.54
Charges, utility revenue and miscellaneous revenue	3'931	27.89	32.81
Total	14'093	100	99.99

Source: United States Census Bureau, (2015b): State and Local Government Finance, data from 2013.

DC's revenue composition looks different than the revenue composition of the average US local government. Federal governmental grants are higher in DC because DC has to perform state functions as well as local functions. The total governmental transfer (state and federal) are a bit higher in the average US local government than in the district. Furthermore, the property tax constitutes in DC not an as important local revenue source than in other US local jurisdictions. This reveals the high share of property that is tax exempted in the district. It seems that DC compensates the constrained property tax base by tax money generated in the sales and gross receipt tax, in the individual income tax, as well as in the corporate income tax. This may explain the comparably high tax rates of the district (O'Cleireacain 1997, 6–10). It is important to note that the US\$ 1.3 billion that have been negotiated in Revitalization Act are not reflected in the budget because the federal government directly carries out certain functions, i.e. prisons, or directly funds certain functions, i.e. courts (Nagel 2013a, 65).

## Public-horizontal

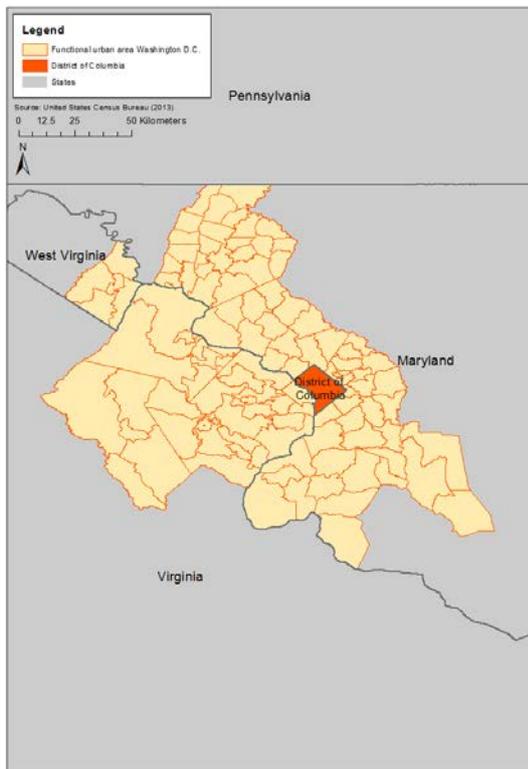


Figure 8: Map of FUA Washington, D.C.

Cartography: Mario Huber

The small-scale district is embedded in a region that is vertically and horizontally fragmented (see Figure 8). 91 local governments are present in the FUA Washington, D.C. spanning over three states and the district. In the North-East of the district lies Maryland what is a Northern State mostly governed by Democrats. In the South-West lies Virginia which is a Southern State mostly governed by Republicans. The district features a traditional democratic majority and a significant African American population. Thus, the institutional fragmentation comes along with different political cultures (Interviews: Buchanan, Fuller). West-Virginia lies at the very margin of the FUA Washington D.C. and is thus not very important for the FUA. The federal level as an additional level adds up to the governing complexity of the region (Interviews: Khan, Young and Wolman).

## Local governance

The local business communities in the District and FUA DC seem well organized. Business organizations have access to local public leaders not via formalized coordination bodies but via their own network channels. This is especially true for developers who have been mentioned in the interviews as powerful agents in the local governance of locational policies.

The Federal City Council (FCC) is a DC centric organization that unites the most important DC business leaders and leaders of non-profit organizations such as universities or hospitals. The FCC perceives itself as a catalyst for progressive initiatives mostly in the areas of infrastructure development as well as education (Interview Clinton). In the case of big infrastructure projects like the renovation of the Union Station, the building of the Convention center, or the Verizon center the FCC activated its network to bring together federal public actors, local public actors and business elites in order to advance the projects and ensure their funding (Interview Clinton). The FCC operates rather quietly and relies on its network (Interview Fuller). The FCC became more powerful by hiring the former mayor of DC Anthony A. Williams as its CEO who is well respected

for modernizing the public administration in DC and pushing economic development initiatives forward (Interviews: Clinton, C. Stone). Furthermore, ten Business Improvement Districts (BIDs) focus on neighborhood economic development in their own relatively small perimeter. These BIDs articulate the interest of the industries present in their perimeter, mobilize private resources and act as mediators between land owners, developers and the local government (Interview Watkins; Schaller 2016). The BIDs are organized in the DC Business Improvement Districts Council (DC BID Council) to collaborate on city wide issues. A further important business organizations is the DC Chamber of Commerce that has around 1'500 members.

On the regional level, two business interest groups seem to be especially relevant. The Greater Washington Board of Trade (GWBoT) is the chamber of commerce of the region. It is a network of business leaders representing all economic sectors (Interview White). The GWBoT initiated The Greater Washington Initiative (GWI) – a public-private partnership – that was concerned with regional horizontal coordination of locational policies but was terminated in 2010 (more in subchapter 8.2.5). This lack of regionalism created a vacuum that the 2030 group, established in 2007, tries to fill. The 2030 consists of about 25 wealthy and influential regional business leaders. A lot of their members are developers (Interview Buchanan). The 2030 group finance studies and evaluations with the aim to have an impact on the economic development agenda. However, they seem to be most influential when they activate their networks because they have access to the top regional decision makers such as the DC mayor as well as the governors of Virginia and Maryland (Interviews: Buchanan, Fuller).

These different organizations meet each other informally and sporadically to find common ground and share their priorities (Interview White). Similarly, these organizations meet regularly with the different governments in the region to discuss economic development issues but there is no-institutionalized way of communication (Interviews: Loescher, Zipper). Most of these business interest groups have their own networks and in DC there operate a lot of hired lobbyists that are representing business interests. Thus, the business interest in the DC region are well heard despite not having formalized communication channels with public leaders (Interview Lazere).

Since the determination of the GWI, no stable partnerships between the individual business organizations and the local governments have been established. Ad-hoc coalitions are formed given the issues at stake. Thus, there is no urban regime present in DC (Interviews: Lazere, Loescher, Young and Wolman, Zipper). A reason for the lack of an urban regime may be the lack of an industrial tradition in DC. The only branch of business that are influential are the developers (Interviews: Clinton, Ruble, C. Stone, Young and Wolman). Thus, an expert calls the local

governance arrangement “rather a growth machine type than an urban regime. It applies more, because DC has no industries, but it has land to develop” (Interview Young and Wolman).

## 8.2. Locational policies in Washington, D.C.

Locational policies are integrated in the Comprehensive Plan that is a general policy document that shall provide guidance for future planning and development of the city required by The Home Rule Act (Interview Khan). The DC Office of Planning is responsible for formulating the Comprehensive Plan. The first Comprehensive Plan was adopted in 1984, the current one became effective in 2011 and a future one is in its amendment cycle in 2016-2017. The economic development agenda – The Five Year Economic Development Strategy for the District of Columbia (5yEDS) – originated from a collaborative policy formulation process (The District of Columbia 2012). The 5yEDS should be a paradigm shift towards being perceived as a business city as an economic development agent explains:

“If you want to do a paradigm shift you need to do a big project and bring people behind the ideas. We wanted to gain legitimacy with the design of the economic development plan (...) The challenge was the old economic development strategies were not reflecting DC’s economy anymore. Health care, high-tech and hospitality were booming industries but not reflected in the old strategies” (Interview Zipper).

The Office of the Deputy Mayor for Planning and Economic Development coordinated the formulation of the 5yEDS in collaboration with the Georgetown University and the George Mason University. Advisory groups were formed compositing of business and civic leaders as well as officials from other departments of the district. 16 MBA students conducted about 200 interviews with local leaders. The aim of such a design was that the business sector would take ownership of the plan which should enhance the legitimacy while helping implement the plan (Interviews: Khan, Zipper). The district government interpreted its role as coordinator and facilitator in the formulation process (Interview Loescher).

The 5yEDS applied a so-called sector-based approach that is an attenuated version of cluster policies. Seven sectors have been identified as targets for economic development policies. These sectors are federal government and federal contractors, professional services, high-tech, hospitality, retail, real estate and construction, higher education and health care. Especially the sectors high-tech, health care, retail and hospitality should decrease the dependency on the federal sector.

The strategic goal of the 5yEDS is to diversify DC’s economy and to educate and prepare the local workforce. Among others, the 5yEDS aims for establishing the most business-friendly economy in the nation, creating the largest technology center on the East Coast, building a world class medical hub and positioning DC as a top North American destination for foreign investors,

businesses and tourists (The District of Columbia 2012, 11–12). The 5yEDS explicitly stated that a tangible goal is to generate 100'000 jobs and US\$ 1 Billion new tax revenue until end of 2017 (The District of Columbia 2012, 12). Astonishingly, 55'000 of these jobs should be established in the construction and real estate sector (The District of Columbia 2012, 12). These jobs should favor the low-educated workforce. The new administration under mayor Muriel Browser (from 2015 ongoing) is likely to invest even more in creating jobs for low-educated workforce, but also in neighborhood development and quality of life questions (Interview Loescher). Feedbacks to the 5yEDS are rather positive. Positive assessed is that the 5yEDS sets goals to diversify from a government town (Interview Tregoning) and that it was well received because of its collaborative structure (Interview Clinton). On the downside, the 5yEDS was criticized because it is rather complicated and is not a “bible that people can refer to” (Interview Lazere).

On the metropolitan level, the formulation of locational policies is fragmented. Each jurisdiction has their own economic development board (Interview Fuller). A coordination platform Commission of Economic Development Officials (CEDO) exists that brings together the economic development agents of the different jurisdictions. However, the purpose of the CEDO is sharing of information and best practices and not coordinating locational policies in the region (Interview Boyer). Since 1957 there is a regional governance structure called the Metropolitan Washington Council of Governments (MWCOG), a non-profit organization in which 22 local governments are cooperating in regional issues. The main policy focuses are transportation, land-use planning and environmental issues whereas regional economic development is of minor importance (more in subchapter 8.2.5).

### 8.2.1. Innovation policies

Innovation policies in DC try to stimulate the interaction between the crucial actors in the local economy, i.e. the ‘triple helix’. These kind of innovation policies are mainly applied in the medical and the high-tech sectors. Only few innovation policies try to stimulate entrepreneurial activities. The knowledge infrastructure is well developed but only loosely connected.

#### Cluster policies

The 5yEDS formulated innovation policies mostly in the medical and high-tech sectors. The idea is to make use of the presence of KIBS firms, universities and public research institutes by fostering technology and knowledge transfers between these crucial actors. For the medical sector, the plan is to position itself as globally top medical hub by linking the 16 hospitals and the over 10 major universities and colleges (The District of Columbia 2012, 32). On the regional level, this medical

hub should leverage the spatial proximity to important anchor organizations such as the John Hopkins University, the NHI and the FDA (Interview Loescher). Thus, in the medical sectors, DC applies a classical cluster strategy as it aims to stimulate interactions of all actors from the ‘triple helix’.

Regarding high-tech firms, the district establishes an innovation campus in the east of the St. Elizabeths hospital by creating a shared environment for academic institutions and technology firms (Cowell and Mayer 2016). Simultaneously, the innovation campus in St. Elizabeths should bring internship and training opportunities to residents in one of the most underdeveloped neighborhoods in the district (The District of Columbia 2012, 26). As an anchor should serve the headquarters of the Department of Homeland Security. Another project is a high-tech corridor between the Convention Center up northwards to Petworth for start-ups and entrepreneurs in the digital sector. Financial incentives for high-tech companies (see subchapter 8.2.4) should attract such companies to settle in this corridor. This tech corridor strategy was not very successful yet, however (Interview Loescher). Both sectors, medical and high-tech are highly regulated sectors. Firms in these sectors are not just oriented towards other firms in their clusters but as well to regulating governmental organizations and knowledge brokers such as the Brookings Institute (Interview Zipper). Thus, the district is able to offer such companies a stimulating environment.

Generally, the DC government pursues a rather holistic innovation approach. A public servant explains “We are not trying to be narrow when thinking about innovation. For us it is as well about the creative economy, the maker-economy such as local food producing and not just about digital tech innovation” (Interview Khan). For example, the high numbers of tourists, business travelers and public servants that come into the district should be leveraged to create job opportunities for low-educated workforce in hospitality and retail. A hospitality academy should help local residents to get employed in these sectors. Thus, DC applies innovation policies mainly in the medical and high-tech sector, but these kinds of innovations should as well benefit local residents mainly through secondary job growth in retail and hospitality. The innovation hub in St. Elizabeths should unite both strategies (Cowell and Mayer 2016).

Other jurisdictions in the region also formulate innovation policies in the high-tech and medical sector. For example, Arlington County, the neighboring jurisdiction in the West of the district belonging to Virginia, focuses on the technological-intense security industry. A good innovation policies example in this regard is the Tandem National Security Innovations (TandemNSI) program that provides a platform for innovative firms to showcase their solutions to security challenges and invites federal agencies to present security challenges they are facing. Thus, TandemNSI links innovative firms with program managers of the relevant federal agencies (Warland 2016a, 26;

Interviews: Barros, Richmond and Winn). Similarly, Montgomery County, the neighboring jurisdiction in the North the district belonging to Maryland, supports cluster activities in the area of biotech (Interview Boyer).

### Start-up and entrepreneurship

The entrepreneurial community in the DC region differs from start-up scenes in the Silicon Valley or Boston. Most of the entrepreneurs in the DC region have already 15 to 20 years of working experience before becoming an entrepreneur (Interviews: Boyer, Levine, Richmond and Winn). A venture capitalist explains that such entrepreneurs “worked in the public sector where they were the top technical guys. They feel more connected to their technical field than to the government. They become entrepreneurs when they grasp a business opportunity that they are not able to try out in their public organizations” (Interview Levine). These entrepreneurs are experienced and already embedded in a network, and thus they are not really in need of an incubator (Interview Levine).

As a consequence, incubators are not as aggressively established in DC as for example in Boston (Interview Clinton). An example of a well-functioning incubator is 1776 that is showcased by the local government (Interview Levine). The 1776 is a private initiative with financial support of technological companies. The DC government is as well a founding partner. Furthermore, 1776 furthermore enjoys support of the Montgomery County government and local universities such as the American University or the Georgetown University. Interestingly, 1776 is an incubator specialized on a capital city economy because they only support start-ups in highly-regulated sectors such as education, energy & sustainability, health, transportation and urban issues (Interview Zipper). In Montgomery County five incubators exist in the sectors of ICT, cyber security and bio technology (Interview Boyer). The city of Alexandria in the Southwest of the district is building up a small incubator for veterans another typical capital city actor (Interview Hawkins and Landrum).

A couple of venture capital funds are present in the DC region. However, the availability of venture capital is limited compared to the US entrepreneurial powerhouses such as the Silicon Valley or the Boston area (Interviews: Levine, Zahradnik). Venture capitalists and equity firms in the DC region are specialized in long-term investments and are not experienced with rather short term holding periods and aggressive growth accelerations (Warland 2016c, 30). The states of Maryland and Virginia both have their own venture capital funds and even different federal governmental agencies established their own funds (Interview Levine). Thus, the start-up initiatives in the DC region are less intense as in US entrepreneurial powerhouses but some of them are focused on the capital city economy.

## Knowledge infrastructure

The knowledge infrastructure in the DC region is well developed. Examples are the Georgetown University, George Washington University, and George Mason University. The district was successful in initiating a collaboration of these knowledge institutes in their economic development strategy (5yEDS). However, these universities seldom cooperate on regional issues and “they represent more the ivory tower model universities” (Interview N. Stone). Important research universities from neighboring states established as well a presence in the DC region with the aim to get a foothold in the place where decisions are being made. Best examples are John Hopkins University from Baltimore and Virginia Tech from Blacksburg. Virginia Tech’s presence in the capital region aims to link its research in societal problems to national decision makers in order to transform ideas into concrete policies (Interview N. Stone).

### Testing expectation 1.1

*E 1.1: A highly developed RIS enables the formulation of innovation policies.*

Expectation 1.1 is not supported. There is co-variance between a fully developed RIS and a wide range of formulated innovation policies, but the causal mechanism stated in E1.1 seem rather reversed. Innovation policies try to foster the interaction between the crucial actors in the economy in order to enable innovation. The discussion of expectation 1.2 develops this insight further.

### Testing expectation 1.2

*E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.*

Expectation 1.2 is supported. Innovation policies aim at to enhance the interactions of crucial actors in technology intense sectors. Local policy makers state that these innovation policies should diversify the RIS that is public sector dependent. Thus, these innovation policies address the RIS failure in DC.

Before 2012, innovation policies in the district were largely missing. The fear of DC’s decision makers was that the regional technology ecosystem would become like a Donut where the district in the middle would feature a low-innovation economy (Interview Khan). The 5yEDS is seen as paradigm change from an old economic development paradigm meaning attracting firms and workforce towards an innovation-based paradigm that aims at enhancing knowledge transfers and

fostering start-ups in order to establish vital sectors and entrepreneurial eco-systems (Interview Loescher).

Innovation policies especially target technology intense sectors because they profit most from enhanced interactions. Examples are the innovation hub in St. Elizabeth, the high-tech corridor or TandemNSI in Arlington. The focus on technological intense sectors that already have a foothold in DC stems from the recognition that the long term decline in federal spending calls for diversification of economic sectors (Interviews: Bean, Loescher, Tregoning). Thus, innovation policies target, at least since 2012, the constraining parts of the RIS.

### 8.2.2. Image building

DC unites a two-dimensional image building strategy: On the one hand, DC position itself as the US capital city, not just within the US urban system but also towards international businesses, investors and guests. On the other hand, DC increased its efforts to lose the image of a government town by showcasing the innovation potential of its highly regulated sectors.

On the international scale, DC is market itself very strategically to the extent that DC is labeled the “capital city of the free world” (Interview Zipper). Thereby stresses DC the presence of the World Bank, the International Monetary Fund, global companies and over 170 embassies (The District of Columbia 2012, 32). For DC’s decision makers this is equally a political and an economic positioning strategy because it opens the perspective to attract international capital (Interviews: Loescher, Zipper). The singular role of DC, to be the US capital but a truly international city as well, is “leveraged to the maximum. It’s all about how and when to play the capital city card” (Interview Zipper).

This aggressive labelling is part of a broader strategy to become a top North American destination for foreign investors, businesses and tourists (The District of Columbia 2012, 32–33). The economic implications of DC’s singular status are impressive as DC welcomes around 1.8 million international visitors. The Chinese tourists are explicitly interesting for the district as they are spending more money in DC (around US\$ 716 per stay) than an average overseas visitor (US\$ 551 per stay) (The District of Columbia 2012, 32). This results in an aggressive China strategy: “the District aims to attract Chinese tourists and identify channels to market the city aggressively” (The District of Columbia 2012, 33). A DC-China Center was established in Shanghai in 2012 as a public-private partnership that should help DC firms entering the Chinese market and should also attract Chinese foreign direct investment (FDI). An incubator for Chinese firms in DC is also in planning (Interview Loescher). DC pairs up with North Virginian jurisdictions to incentives Air China

having direct flights from Beijing to the Dulles Airport in the FUA DC (Interview Loescher). Besides this strong focus on China, DC targets as well other emerging markets such as Qatar, Brazil and South Africa but I could not detect any explicit initiatives so far (The District of Columbia 2012, 32).

On the national market, DC want to showcase its potential as a technological hub. This image building strategy should attract well-educated workforce by emphasizing quality of life aspects as well as DC's entrepreneurial ecosystem (The District of Columbia 2012, 27). DC also tries to attract national visitors by increasing marketing and promotion activities (The District of Columbia 2012, 29). Furthermore, hosting of special events and conventions should be streamlined. In that regard, the district sees itself in competition with cities like San Francisco or Chicago (The District of Columbia 2012, 28).

The jurisdictions in the FUA DC also formulate image building strategies based on the capital city status. An expert summarizes that "every jurisdiction in the region is selling the capital city status. In a second step, they want to distinguish themselves" (Interview Fuller). They refer to the capital city status of DC, because it is a singular status in the US urban system. Arlington focuses on the US market by promoting itself as "the only place in the US to do high-tech security business" (Interview Richmond and Winn). Alexandria highlight its connectivity within the national capital region via Metro, Beltway and airport (Interview Hawkins and Landrum). Rockville, north of the District in Maryland, uses the district as a geographic locator but highlights its local assets such as cheaper prices of land and real estate and its amenities (Interview Boyer).

### Testing expectation 2

*E2: A highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.*

Expectation 2 is supported. DC strategically employs a two-fold image building strategy. DC is leveraging both assets, i.e. the capital city status and its RIS that is based on highly regulated sectors, to the full extend (Interview Zipper). The image building strategy unites these two local assets to one coherent image building strategy. For DC decision makers, it is not an either-or question (Interview Loescher). The jurisdictions in the region also draw on the capital city status and their local assets. They use the brand DC for their own purposes as they highlight specific aspects in which they outperform the district (e.g. spatial proximity to the Pentagon in Arlington, Virginia or cheaper prices in Rockville, Maryland).

### 8.2.3. Business prerequisites

The district is not competitive in regional tax competition when only taking the corporate tax rate into account. Furthermore, DC’s real estate market is under supplied which increases the land and real estate prices. Thus, DC features unfavorable business conditions. As an alternative, the district tries to attract or residents by heavily developing its infrastructure, real estate and neighborhoods.

DC’s capital city specific local autonomy constraints and its specific constitutional status (see subchapter 8.1.4), creates a unique tax setting. The District is allowed to levy taxes typically collected by local governments, such property taxes, as well as taxes usually imposed by US states, such as individual and corporate income taxes. The Districts tax revenue is made up about one third of usually locally generated taxes and two thirds from taxes usually collected by a state (The District of Columbia 2015, 2). Table 40 compares the personal income tax rate, the corporate income tax rate and the property tax rate between jurisdictions in the FUA DC.

Table 40: Comparison of tax rates in the FUA DC

Jurisdictions	Personal income tax	Corporate income tax	Property tax
<b>DC</b>	Under \$ 10'000: 4% \$ 10'001 - \$ 40'000: 6% \$40'001- \$60'000: 7% \$ 60'001 - \$ 350'000: 8.5% Over \$ 350'000: 8.95 %	9.975 %	Residential: 0.85% Commercial: 1.85% Vacant: 5% Blighted: 10%
<b>State of Maryland</b>	Under \$3'000: 2-4% \$ 3'000 to \$ 150'000: 4.75 % Over \$ 150'000: 5-5.75%	8.25 %	-
- Charles County	+ 3.03% <sup>1</sup>		1.317%
- Montgomery County	+ 3.2% <sup>1</sup>	-	1.1%
- Prince George County	+ 3.2% <sup>1</sup>		1.072%
<b>State of Virginia</b>	Under \$ 17'000: 2-5% Over \$ 17'000: 5.75%	6%	-
- Alexandria			1.043 %
- Arlington County			0.996 %
- Fairfax			1.040 %
- Fairfax County	-	-	1.114 %
- Falls Church			1.305 %
- Loudoun County			1.155 %
- Prince William County			1.221 %

Source: District of Columbia (2015).

Note: <sup>1</sup>These are additional local personal income tax rates. Sometimes they are called piggyback taxes.

This comparison of tax rates plus the interview statements sketches the regional tax competition as follows<sup>50</sup>: DC is friendly for residents, especially for families with lower incomes but features high corporate taxes (Interviews: Lazere, White, Zahradnik).<sup>51</sup> Maryland features rather high personal income tax rates because the counties can levy additional taxes, the so-called piggyback taxes. However, jurisdictions in Maryland invest more in creating favorable living environment for residents (Interviews: Buchanan, Wolman and Young). Virginia's tax settings are business friendly and favorable for high-income residents (Interviews: Boyer, Buchanan, Clinton, White, Wolman and Young). A business actor explains the dynamics following in these different tax settings:

“Due to the lack of any piggy back taxes on personal income such as Suburban Maryland counties have, the jurisdictions in Northern Virginia need to be very aggressive with economic development incentives so that their tax base can benefit from the growth of establishments filling commercial space and those facilities paying increased real estate taxes” (Interview Buchanan).

From the moment of self-government (1973) to the turnaround in the District Finances (around 2000), the district was perceived as not providing a business friendly environment. However, the stabilization of the district's finances and professionalization of the district's administration changed this perception (Interviews: Buchanan, Lazere). DC was furthermore able to lower their tax rates and is now more competitive in the regional tax competition (Interviews: Clinton, Lazere, Watkins, Zahradnik). Since 2010 DC has attracted a lot of new high-income residents which has decreased the salience of the high tax rate discussion (Interview Lazere).

DC is vertically and horizontally landlocked leading to supply issues of real estate that increase land and real estate prices as well as rents (Interviews: Lazere, White). In addition, tax-exempted real estate furthermore diminishes the property tax base. As a consequence, DC invests heavily in a development of neighborhoods and big infrastructure projects to enlarge its property tax base (Interview Tregoning). For the same reason, DC's government increases its activities to convert

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<sup>50</sup> This tax-centric view on regional competitiveness is one-dimensional as it does not incorporate the quality of local and sub-national public services (Interview Fuller). DC may have some inequality in public services especially in its school system (Interview Wolman and Young) but it is a priority of the district to improve the quality of its schools what has been already accomplished to a certain degree (Sturtevant 2014). Furthermore, comparing nominal tax rates does not necessarily provide an accurate picture of tax competitiveness given the wide array of fees, adjustments, and provisions.

<sup>51</sup> A study of the District of Columbia (2015) compares the tax burden of a hypothetical family consisting of two wage-earning spouses and one school-age child to the tax burden in different jurisdictions of the FUA DC based on individual income tax, residential property tax, general sales and use tax, and automobile taxes. Given this setting, DC taxes its residents lower than neighboring jurisdictions at various income levels up to US\$ 150'000.

the shirking federal office demand to mixed-use building to enlarge the real estate demand side (Interviews: Loescher, Watkins). The local government tries to mediate between the federal government and private real estate developers to better anticipate vacated federal properties (The District of Columbia 2012, 24). Similarly, DC pushes for transferring unused federal land to developers such as the Wharf waterfront revitalization in the Southwest, the Yards at M-Street in the South of the district and St. Elizabeths in the South of the district east of the Anacostia river (Interview Anonymous). Also the strikingly high tax rates for vacant and blighted real estate (see Table 40) shows that developing unused or outdated real estate development is a priority for the district.

Such a development agenda should not only enlarge the property tax base but also the personal income tax base. By focusing on so-called place-based development, DC tries to lure wealthy residents as well as talent into the district. Neighborhoods should be transformed to high quality of life areas by incentivizing the establishment of small retail businesses as well as cultural institutions, improving schools, and decreasing crime rates (Interview Khan; Sturtevant 2014). For example, DC facilitates the use of vacant or underutilized properties for local artists and other members of the creative economy with the goal to create an environment attractive for the creative class (The District of Columbia 2012, 29; Interview Khan). This development agenda that relies on large scale infrastructure projects as well as place-based development is, for example, materialized and linked in St. Elizabeths. Whereas the innovation campus and the new headquarters of the Department of Homeland Security should serve as the anchors for developing the neighborhood, long-term residents should profit from training opportunities and new residents should be attracted by cultural amenities such as libraries and cafes (Cowell and Mayer 2016).

A former DC public servant concluded that “the economic development plan in DC heavily relies on real estate development” (Interview Tregoning). This also explains, according to the former public servant, the strikingly high number of jobs added in the real estate and construction sector stated in the 5yEDS (55’000 out of 100’000 added jobs). Similarly, Sturtevant (2014) showed that population growth in the district was a priority for the leadership. It seems that this development agenda is an outcome not only of this population growth strategy but also fueled by a type of growth machine. Asch and Musgrove (2016, 128) critically describe how “real estate agents, developers, lenders landlords, and new residents have taken advantage of historic, state-sanctioned underdeveloped Black communities to make money off of her homes”. Doubtlessly, the intensity of real estate development increasingly leads to gentrification and segregation processes with especially negative consequences for poorer long-term local residents (Howell 2016).

### Testing expectation 3

*E3: High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.*

Expectation 3 is not supported. High local tax autonomy does not lead to a focus on tax rates. DC pursues a development and population growth agenda that promotes other local assets than the tax rates are promoted.

DC invests much in neighborhood development and the development of large infrastructure projects. The aims are to enlarge its constrained real estate tax base as well as to attract wealthy residents. Underused and therefore low value real estate is transferred to developers. To enlarge the personal income tax base in the district, the place based development strategy should attract the creative class as well as wealthy residents, for example young couples with a double income and no kids (so-called DINKS) (see also Sturtevant 2014; Interview C. Stone). An economic development agent elaborates that “place specific investments is our key narrative that we are following and telling. Thus, DC is also viewed as a talent attractor. DC did a great job and now we have to be careful how we avoid the bad symptoms of gentrifications such as unaffordability of housing and real estate” (Interview Khan).

Thus, the district’ strategy to sustain in the regional tax competition is not by lowering its tax rates but enlarging its tax bases. Thereby, the district can play out its core city advantages such as a high density of amenities or diversity of neighborhoods while constantly developing its neighborhoods as well as large scale infrastructure projects. Thus, the locational policy manifestations in the business prerequisites category are diametrical opposed than expected in E3.

#### 8.2.4. Acquisition

The district actively acquires firms and FDI. Regarding firms, DC liaise with brokers and specific side locators in order to be more competitive in luring firms into the district. The different jurisdictions in the FUA DC aggressively acquire firms from within and beyond the region which leads to a regional competition to the extent of beggar-my-neighbor behavior. Regarding FDI, DC is very active in China but also targets other emerging markets.

DC aims to deepen the cooperation with brokers, accountants and lawyers who play a pivotal role in locational decisions of businesses (The District of Columbia 2012, 25) but also to “proactively identify and recruit businesses with expiring leases that can benefit from locating in DC” (The District of Columbia 2012, 25). To achieve these stated strategies, the district employs a specific person for corporate attraction who cooperates with brokers, side locators and directly with

companies to lure them into the district (Interviews: Loescher, Zipper). Furthermore, the executive economic development agency Washington DC Economic Partnership is present at important conferences and trade shows such as CoreNet a corporate real estate conference or SXSW focusing, among others, on emerging technologies (The District of Columbia 2012, 23). With a more specific focus, DC targets highly technological firms that fits to the high-tech and medical technology sectors by offer tax incentives for so-called Qualified High Technology Companies (Interview Loescher; The District of Columbia 2012, 33).

Additionally, the jurisdictions in FUA DC engage in firm acquisition. The Greater Washington Initiative (GWI) – a public-private partnership – did acquisition and marketing for the whole region until its termination in 2010. Now especially the bigger jurisdictions act rather aggressively on their own (Interview: Fuller, Richmond and Winn). This leads to a fierce regional competition regarding firm acquisition and attracting tax payers (see subchapter 8.2.5). An example is the relocation of the National Science Foundation from Arlington to the neighboring Alexandria in 2017. This attraction of a prestigious knowledge organization from a neighbor employing about 1700 people show the high competitiveness regarding acquisitions within the region (Interviews: Hawkins and Landrum, Richmond and Winn). Firms and organizations are aware of this competition and approach the different jurisdictions directly or via brokers to scan for the best bid (Interviews: Hawkins and Landrum, Loescher, Zipper). DC recently started to increase its activities because DC wants to be at the table when relocation decisions are being made (Interview Zipper).

Regarding FDI, the district mainly targets investments from China, but also emerging markets are increasingly targeted (The District of Columbia 2012, 33). The DC-China Center has the task to acquire FDI into the district (The District of Columbia 2012, 33). Furthermore, the district organized a number of trade mission to China and other emerging markets (Interview Loescher). DC is especially successful in attracting foreign real estate investment. According to an economic development agent, DC is perceived as a fairly safe investment environment and the district supports big infrastructure projects such as the Union Station, the Convention Center, the Wharf or St. Elizabeths (Interview Loescher).

#### Testing expectation 4

*E4: A highly developed RIS enables the adaption of a profound and large-scale acquisition strategy.*

Expectation 4 is partly supported. DC pursues a profound and large-scale acquisition strategy, but this acquisition strategy is based on the highly developed RIS and the capital city status.

The acquisition strategy is profound because they apply different acquisition tools such as cooperating with brokers, offering tax incentives, being present at tradeshow, organizing trade mission, and establishing a special DC-China center. The acquisition strategy is large-scale because the district targets the national market as well as different international markets. However, this acquisition strategy is not only enabled by its highly developed RIS as stated in expectation 4. It is the combination of a developed RIS in highly regulated markets, such as cyber technology or medical technology, as well as the prestigious US capital city status that enables such a profound and large-scale acquisition strategy. Similarly, the big jurisdictions in the FUA DC are active and aggressive in acquisition. They also leverage both the highly developed capital city RIS as well as the capital city status by highlighting their spatial proximity to the US capital.

#### 8.2.5. Coordination

The jurisdictions in the FUA DC rather compete than cooperate in locational politics. Regional coordination platforms are terminated or are not able to coordinate locational policies which leads to a fierce regional competition and in some instances even beggar-my-neighbor behavior.

The Greater Washington Initiative (GWI) – a public-private partnership and a product of the Greater Washington Board of Trade (GWBoT) – was concerned with marketing and acquisition for the whole DC region. The GWI was mostly funded by the different jurisdictions in the region. Whereas the smaller jurisdictions appreciated the standardized marketing of the GWI, the larger jurisdiction such as Arlington, Alexandria, Fairfax, or Montgomery pursued their own marketing and acquisition activities (Interviews: Hawkins and Landrum, Richmond and Winn, White). As a consequence, some members stopped the funding of the GWI that led to its dissolution in 2010.

Following the termination of the GWI, three organizations have been left that tackle some aspects of locational policies coordination in the region. Firstly, the GWBoT downscaled its activities after the termination of the GWI to transportation, emergency response, environmental technology and workforce policies (Interview White). The GWBoT is still an important private sector organization but it lost its regional coordination function.

Secondly, the Commission of Economic Development Officials (CEDO) brings together economic development agents from the different jurisdictions plus representatives of the GWBoT. However, the purpose of the CEDO is sharing information and best practices. CEDO does not have much resources at hand and thus pursues no joint efforts regarding formulating or coordinating locational policies (Interviews: Boyer, Hawking and Landrum).

Finally, the Metropolitan Washington Council of Governments (MWCOCG) is a regional coordination body of 22 jurisdictions in the metropolitan region, with the focus on transportation, land-use planning and environmental policies. The MWCOCG engages in some activities regarding locational policies but struggles to get the support of the jurisdictions in this policy area (Interview Bean). In 2012, the MWCOCG launched a regional economic development vision called Economy Forward with the aim to further develop and diversify the private sector in the region what should help to cope with decreasing federal spending (Interview Bean). This private sector diversification should be achieved in expanding industries such as biotech, cybersecurity, ICT, professional services, hospitality as well as shipping and cargo (Metropolitan Washington Council of Governments 2012). However, the vision never got real traction because it is assessed as too consensus oriented and a bottom-up wish list that gives a piece of cake to every jurisdictions (Interviews: Buchanan, Hawkins and Landrum). Neither the MWCOCG nor the CEDO nor the GWBoT are able to fill in the vacuum that opened up after the termination of the GWI. It seems that the jurisdictions are disillusioned regarding formulating or coordinating regional locational policies.

All interviewees agreed that jurisdictions in the DC region fiercely compete to acquire firms and tax payers (for example Interviews: Boyer, Hawkins and Landrum, Ruble, White, Richmond and Winn, Zipper). Technically, there is a non-poaching agreement, within the FUA DC dating back to the predecessor organization of the CEDO, that says that jurisdictions are not allowed to actively contact a firm proposing a relocation unless the firm contacts the jurisdiction first (Interviews: Boyer, Richmond and Winn). The jurisdictions could not agree on a new non-poaching agreement under the auspice of the GWI (Interview White). Even though this so-called poaching is not appreciated and condemned in a lot of interviews, the non-poaching agreement has only a very limited impact because firms are aware of the obvious competition and approach the different jurisdiction directly or indirectly via brokers or side locators (Interviews: Hawkins and Landrum, Loescher, Zipper). The within competition is so severe that we can find in some instances beggary-neighbor behavior. Examples are the competitive bids of neighboring jurisdictions for different anchor organizations such as the NSF or big companies such as Lockheed Martin (see subchapter 8.2.4). An economic development agent explains the strategy of jurisdictions in this regional competition:

There is an overlap in the jurisdictions assets and strengths (...). We did an analysis in which we identified our strong clusters and potential clusters that are present in other jurisdictions but we do not have. We should have our fair share as well in these clusters. So it is a strategy of 'guarding' our companies and 'going after' new firms and organizations (Interview Hawkins and Landrum).

A lot of interviewees assess this competition as a zero-sum game that is counterproductive for the whole region (Interviews: Boyer, Wolman and Young, Zipper).

#### Testing expectation 5.1

*E5.1: High institutional fragmentation and high local tax autonomy constrain regional coordination.*

Expectation 5.1 is supported. The interviewees point out to the two expected explanatory factors of this regional competition in the FUA DC.

The FUA DC features high vertical and horizontal institutional fragmentation. Its core – the District of Columbia – only accounts for about 10% of the population. The three states and the District of Columbia account for different political settings. Whereas the two Virginias are Southern states that only allow limited local autonomy, Maryland is a Northern state in which local jurisdictions enjoy more autonomy (Interviews: Fuller, Hawkins and Landrum). The district is a very specific political construct with a unique fiscal incentives structures given the district's many tax constraints. These high institutional fragmentation, i.e. the interplay of three states, the District and the federal government, makes regional coordination complicated especially if we consider that every jurisdiction has their own economic development board (Interviews: Fuller, Young and Wolman).

This institutional fragmentation in combination with high local tax autonomy can explain the competition in the DC metropolitan region. The regional competition is primary about taxes but this competition is carried out in an unlevel playing field because the different jurisdictions feature different tax settings. The jurisdictions in Virginia are assessed as very competitive and aggressive in acquiring firms, whereas the jurisdictions in Maryland are allowed to levy piggy back taxes on personal income which makes them more focused on creating favorable living conditions for their tax payers (Interviews: Buchanan, Fuller, Richmond and Winn, Wolman and Young). Thus, “tax competition underpins everything” (Interview Buchanan).

Regional tax competition hampers the formulation and coordination of locational policies in the region. Thus, there is no impetus of increasing the global competitiveness of the DC region in a coordinated manner (Interview Clinton). A regional coordination leader sums it up: “We can't change anything about the institutional fragmentation and the different tax system. So we have to accept that and try to work around it” (Interview Bean).

## Testing expectation 5.2

*E 5.2: Coordination aims at overcoming the constraining parts of the MLG setting.*

Expectation 5.2 is not supported. DC faces many capital city specific constraints. The political barriers are too high to amend the constitution-based capital city specific constraints. Yet DC has some leeway in lobbying for compensation payments. Furthermore, the FUA DC is institutional fragmented and thus constrained on the public horizontal dimension. Regional coordination is not able to overcome institutional fragmentation due to high local tax autonomy because too much tax revenue is possibly at stake.

Local decision makers have been trying to overcome the capital city specific constraints in the recent years. Since the Home Rule Act of 1973, DC lobbies for full representation in Congress. In 2006 a failed package deal that would get the DC delegate in congress voting rights in exchange for one more congress seat for Utah (Interview Young and Wolman). Since this deal failed, local decision makers in DC switched their focus towards lobbying for statehood instead of voting rights in the House (Interview Young and Wolman). However, the political feasibility of establishing the 51<sup>st</sup> State of New Columbia is low. Since the early 1980s, thirteen statehood bills have been introduced and all of them failed because full representation could only be achieved through constitutional amendment (Nagel 2013a, 70–71). For sure, an amendment of the Constitution “is difficult to achieve when the majority of the states that have to ratify it hold the monopoly of representation – why should they share?” (Nagel 2013a, 75). There are political motives in play because full representation of DC would potentially result in an urban, progressive, Democratic and African American legislator (Nagel 2013a, 75). Furthermore, the neighboring states of Maryland and Virginia are against DC representation because DC would get the right to tax the non-residential workforce (Interviews: Anonymous, Lazere, Young and Wolman; see also Harris 1995, 264–65; Nagel 2013a).

Regarding the congressional blockages of controversial local societal policies via social riders (see subchapter 8.1.4), the strategy of the DC government is to make these blocked societal policies a US-wide discussion with the intention to raise people’s awareness of the District’s limited local autonomy (Interview Anonymous). However, the district has found no pathway yet to overcome the constitution-based capital city specific constraints.

Regarding the capital city specific constraints of the local tax autonomy, the district negotiated compensation payments. The Revitalization Act in 1997 is described as a big compromise because it established lump sum payments to compensate for the restricted local tax autonomy (see subchapter 8.2.6). However, no amendments to alleviate the capital city specific constraints of the

local tax autonomy have been made. Thus, it is not able to overcome constitution-based capital city specific constraints. However, DC is able in some instance to negotiate compensation payments for this capital city specific constraints.

Efforts to overcome the institutional fragmentation in the region failed. The MWCOG and to a certain degree the GWBoT try to act as facilitators to connect the important actors and jurisdictions in the region. But their success in coordinating locational policies was marginal (Interview Bean). For example, the jurisdictions share a common problem understanding, i.e. dependence on federal spending, and a common problem solving approach, i.e. private sector diversification especially in the emerging cyber security market (Interview Fuller). Regional coordination platforms like the GWBoT and the MWCOG try to build on these commonalities as they try to launch for example a regional cyber security strategy. However, the commitment of the jurisdictions for these regional cyber security strategy is missing so far (Interviews: Bean, White). It seems that since the termination of the GWI, the jurisdictions are disillusioned and “only willing to cooperate on low-hanging fruits” (Interview Buchanan), i.e. policy areas with few tax revenue at stake such as transportation, emergency response and environmental issues (Interviews: Buchanan, Loescher). In these policy areas the MWCOG serve as the partnership platform, whereas regarding locational policies the jurisdictions perceive themselves as competitors (Interviews: Khan, Morris.). Thus, the institutional fragmentation in combination with high local tax autonomy is a too big obstacle for coordination to overcome.

#### 8.2.6. Public funds and compensation payments

Federal funds and compensation payments are an important financial revenue for the district as they make up almost 30% of the annual revenue (see subchapter 8.1.4). After the big compromises in the Revitalization Act of 1997 that should attenuate the structural income deficit, DC lobbied since the turn of the millennium for a new infrastructure deal as well as successfully attracted federal funding for its Metro system.

The infrastructure debate has been launched in 2008 and is still pending. A coalition of DC centric organizations led by DC Appleseed calls for 1 Billion federal dollars that should help funding the modernization of the district’s outdated infrastructure (Interviews: Rivlin, Smith, Wolman and Young). However, when this debate was launched by the coalition, the financial crisis and the following federal budget cuts have prevented this infrastructure debate from getting traction (Interviews: Lazere, Rivling and Smith, Wolman and Young).

In the case of the Metro public transportation system, the federal level pays US\$ 1.5 Billion subsidies per year because the federal level has an interest in a functioning Metro system in the DC region (Interviews: Anonymous, Bean). If these federal subsidies for the Metro decrease, the Metro's funding is not secured because the jurisdictions do not agree on a financing mechanism (Interviews. Buchanan, Fuller).

### Testing expectation 6

*I: High local tax autonomy constrains to ask for public funds.*

*II: Capital city specific constraints enable to ask for compensation payments.*

Both expressions of expectation 6 are supported. When launching the debate about a new infrastructural deal or when asking for federal funding for the Metro, these claims are justified by the capital city specific constraints of the district. Regarding the second expression of E6, the US political-institutional setting does generally not enable initiatives that ask for public funds because municipalities enjoy high local tax autonomy.

As I have outlined in subchapter 8.1.4, the district is not able to amend its capital city specific constraints but the district is successful in some instances to receive compensation payments for these capital city specific constraints. In all these negotiations, for example in the revitalization act, the debate about a new infrastructure deal and the federal Metro funding, DC decision makers explicitly referred to the high political barriers for amending the capital city specific constraints. A former local decision maker explains the strategy when launching the campaign for the new infrastructure deal:

“We launched the discussions for the new infrastructure deal because the Obama administration came into power. We thought the Clinton administration gave us the Revitalization Act, the Bush administration gave us some land that we could develop and so we can also give the Obama administration a choice to improve the district. The commuter tax was always the elephant in the room over the years because every state can do that. Also because it is a lot of money given the amount of commuters. We thought we are probably not getting the commuter tax but we can negotiate a compensation for it” (Interview Smith).

Thus, the capital city status that brings along federally imposed local autonomy restrictions is a good argumentative strategy for justifying federal funds and compensation payments. However, for an average US local government, the possibilities to attract public funds are rather small because local governments enjoy high local tax autonomy.

### 8.3. Explaining locational policies in Washington, D.C.

In this subchapter, I will first summarize the manifestations of locational policies in order to depict the locational policies agenda of DC (see Table 41). In the following, I will discuss the tested expectations (see Table 42) and try to connect them in order understand the interdependencies in formulating locational policies.

Table 41: Locational policies agenda of Washington, D.C.

<b>Locational policies</b>	<b>Manifestations of locational policies</b>
Innovation policies	<ul style="list-style-type: none"> <li>- Stimulating knowledge interactions in the high-tech sector and the medical sector</li> <li>- Few strategies to foster start-ups and entrepreneurship</li> </ul>
Image building	<ul style="list-style-type: none"> <li>- Two-dimensional strategy: “Capital city of the free world” and highlighting the innovation potential of highly regulated sectors</li> </ul>
Business prerequisites	<ul style="list-style-type: none"> <li>- Enlarging tax bases: Land, real estate and infrastructure development plus place based neighborhood development</li> </ul>
Acquisition	<ul style="list-style-type: none"> <li>- Profound acquisition strategy: a wide variety of acquisition tools</li> <li>- Large-scale acquisition strategy: National and international markets (mainly in China)</li> </ul>
Coordination	<ul style="list-style-type: none"> <li>- Regional tax competition and beggar-my-neighbor behavior</li> </ul>
Public funds and compensation payments	<ul style="list-style-type: none"> <li>- Asking for compensation payments based on capital city specific constraints</li> </ul>
Locational policies agenda	<ul style="list-style-type: none"> <li>- Creating innovation in the medical sector and the high-tech sector</li> <li>- Leveraging the US capital city status and the innovative highly regulated sectors, i.e. positioning strategy as government city and business city</li> <li>- Infrastructure and neighborhood development</li> <li>- Asking for compensation payments by referring to capital city specific constraints</li> </ul>

The locational policies agenda of Washington, D.C. is dominated by four topics. First, innovation policies mainly target the medical sector and the high-tech sector. Both sectors are technology intense and highly regulated. In the retail and hospitality sectors the emphasis lies on educating and preparing the local low-educated workforce. Second, the DC administration tries to leverage the status as the US capital city to the maximum by for example using the catchphrase “capital city of the free world” in some instances. By simultaneously highlighting the economic dynamics in its highly regulated sectors, DC is able to unite the government city image building with an image of an innovative business city. This united positioning strategy can be detected in both outward oriented locational policies, i.e. image building and acquisition. Third, the development of large infrastructure projects and neighborhoods constitute a main element of the locational policies activities. Such physical development strategies are an instrument to directly enlarge the local property tax base as well as indirectly enlarge the personal income tax base by becoming more

attractive for wealthy residents. Fourth, asking for federal compensation payments based on its capital city specific constrained is an ongoing debate in DC. Since the political feasibility to amend the constitutional status of the district is very low, DC concentrates on asking for compensation payments.

Table 42: Expectation testing Washington, D.C.

Expectation	Expectation testing	Specifications
E1.1: A highly developed RIS enables the formulation of innovation policies.	Not supported	- Reversed causality
E1.2: Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Supported	-
E2: A highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.	Supported	-
E3: High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.	Not supported	- Focus on developing neighborhoods and large-scale infrastructure projects
E4: A highly developed RIS enables the adaption of a profound and large-scale acquisition strategy.	Partly supported	- The profound and large-scale acquisition strategy is enabled by the highly developed RIS as well as the prestigious US capital city status.
E5.1: High institutional fragmentation and high local tax autonomy constrain regional coordination.	Supported	-
E5.2: Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported	- Coordination is not able to amend constitution-based capital city specific constraints and to overcome institutional fragmentation in the FUA DC
E6: <i>I</i> : High local tax autonomy constrains to ask for public funds. <i>II</i> : Capital city specific constraints enable to ask for compensation payments.	Supported Supported	-

Table 42 summarizes the tested expectations in the case of DC. In the following paragraph, I discuss the expectations stemming from the RIS as the explanatory variable whereas in the next paragraph I discuss the expectations stemming from the MLG setting.

The formulation of innovation policies is not enabled by the fully developed RIS (E1.1). On contrary, innovation policies are strategic locational policies tools to target the constraining elements of the RIS (E1.2). The highly developed RIS enables an image building strategy that unites the US capital city status with the economic dynamics in its highly regulated sectors (E2). Similarly, the acquisition strategy bases on both the capital city status and the highly developed RIS. Thus, DC is able to leverage its capital city status also in its acquisition strategy (E4).

High local tax autonomy of US local governments in combination with high institutional fragmentation in the FUA DC causes a fierce regional tax competition (E5.1). The vertical institutional fragmentation (three states and the district) seems to especially fuel tax competition because the jurisdiction operate in different tax settings what creates an unlevel playing field. Coordination is not able to overcome this regional tax competition because the jurisdictions seem disillusioned and only willingly to cooperate in policies with few financial consequences at stake (E5.2). In this regional tax competition, the district does not focus on lowering tax rates. Instead DC invests heavily in infrastructure development and place-based development which should enlarge its property tax base and personal income tax base (E3). Furthermore, DC is not able to amend the constitution-based capital city specific constraints despite many attempts in doing so (E5.2). However, these capital city specific constraints are a good argument when negotiating for federal compensation payments (E6).

#### 8.4. Conclusion

The locational policies agenda is dominated by four main topics. First, innovation policies are mainly formulated to enhance knowledge interactions in the medical sector and the high-tech sector whereas in the retail and hospitality sectors the emphasis is on educating and preparing the local workforce. This dual strategy addresses the duality of workforce. “The challenge is to prepare the low-educated workforce for employment in the knowledge economy” (Interview Lazere). Another expert elaborates further:

“If half a century ago, the challenge for DC was to generate any sort of jobs, the challenge today is different. DC generates high skilled jobs and there is a desperate need to generate jobs requiring lower skill levels. DC is hardly alone but the social consequences are a bit different because the federal government was the kind of employer who hired people at different skill levels for a long period of time. As the government has switched to contracting out many duties, al lot of jobs are no longer performed by people with a long term employment” (Interview Rubble).

Second, the DC administration tries to leverage its US capital city status by even using the catchphrase “capital city of the free world”. DC managed to unite the government city image with

an image of an innovative business city. Similarly, the acquisition strategy bases on DC's innovative economic sectors as well as its capital city status. Thus, the case of DC shows that if a capital city features a highly developed RIS, a positioning strategy can showcase economic and political local assets.

Third, the development of infrastructure projects, the large real estate constructions and place-based neighborhood development constitute central element of DC's locational policies activities. Such physical development strategies are an instrument to directly enlarge the local property tax base as well as indirectly enlarge the personal income tax base by becoming attractive for wealthy residents. This development orientation may be explained by the regional tax competition in which DC is not competitive based on its tax rates. Instead, the district relies on core city advantages such as exciting, dense and diversified neighborhoods. Another explanation for this development orientation is the strong role of developers in the local governance regime. These economic actors have direct material interests in DC's development orientation. A type of growth-machine can be found in DC. The district also hopes that these development activities will create jobs for low educated residents as they forecast a growth of 55'000 jobs in the construction and real estate sector until end of 2017 (The District of Columbia 2012, 12). This development strategy bears fruit as the population is growing steadily and the district is prospering. However, DC may also search for strategies to ensure the affordability of housing for its poor mostly African American residents in these ongoing gentrification processes (Howell 2016). For sure, DC is a place "in which rapid transformation rather than stability is normal" (Ruble 2016, 333).

Fourth, since Home Rule in 1973, the district frequently launches new claims for federal compensation payments. DC always puts forward the many capital city specific constraints to justify these compensation claims. In fact, DC is the SCC in the Western world that has to face the most capital city specific constraints (Boyd and Fauntroy 2002; Wolman et al. 2007). Thus, I expect that such compensation claims will perpetuate unless it becomes politically feasible to ease the constitution-based capital city specific constraints.

## 9. Discussion: Comparing locational policies in secondary capital cities

This chapter juxtaposes within-case analyses with a comparative case study research design that offers a solid base to evaluate causal claims (Collier, Brady, and Seawright 2010, 10). The tested expectations and its underlying causal mechanism are compared expectation by expectation. All findings are discussed with regard to their theoretical and practical implications. Locational politics, i.e. the local governance regime, has been treated rather marginally so far but is addressed in subchapter 9.2. Finally, the external validity of the findings is discussed with regard to other SCCs as well as to state-anchored secondary cities (see subchapter 9.3).

### 9.1. Expectation testing

Table 43 summarizes the comparative results for each expectation. In the following, I discuss the results from the case studies expectation by expectation and outline their practical and theoretical implications.

Table 43: Comparative results from tested expectations

Nr.	Expectation	Bern	Ottawa	The Hague	Washington, D.C.	Overall
E1.1	- A moderately or highly developed RIS enables the formulation of innovation policies. - A weakly developed RIS constrains the formulation of innovation policies.	Not supported	Not supported	Not supported	Not supported	<b>Not supported</b>
E1.2	Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Partly supported	Supported	Supported	Supported	<b>Supported</b>
E2	- A moderately or highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy. - A weakly developed RIS enables the formulation of a capital city image building strategy, but constrains the formulation of a business town image building strategy.	Supported	Supported	Supported	Supported	<b>Supported</b>
E3	- High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category. - Low local tax autonomy constrains to focus on income taxes and enables to focus on providing and developing land and real estate.	Not supported	Supported	Supported	Not supported	<b>Partly supported</b>
E4	- A moderately or highly developed RIS enables the adaption of a profound and large-scale acquisition strategy. - A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy.	Not supported	Not supported	Partly supported	Partly supported	<b>Not supported</b>
E5.1	- High institutional fragmentation and high local tax autonomy constrain regional coordination. - Low institutional fragmentation and low local tax autonomy enable regional coordination.	Supported	Supported	Partly supported	Supported	<b>Supported</b>
E5.2	Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported	Partly supported	Not supported	Not supported	<b>Not supported</b>
E6	- Low local autonomy enables to ask for public funds and compensation payments. - High local autonomy constrains to ask for public funds and compensation payments.	Partly supported	Supported	Supported	Supported	<b>Supported</b>

### 9.1.1. Innovation policies

I discuss expectation 1.1 and expectation 1.2 together because they contain opposite directions of causality. Whereas expectation 1.1 assumes that only in a well-developed RIS innovation policies are enabled because innovation as a non-linear and interactive process requires intensive interaction between different actors (Edquist 1997), expectation 1.2 assumes that innovation policies can directly aim at the needs and problems resulting from a RIS, i.e. they may directly address RIS failures (Cooke 2001; Tödting and Trippel 2005; Martin and Trippel 2014). The case studies lend support to the latter expectation and do not support the former (see Table 44). In none of the four SCCs, innovation policies are constrained or enabled by the development of the RIS. However, innovation policies do not operate independently from the RIS, because innovation policies are a strategic locational policy tools that directly address the constraints ensuing from the RIS.

Table 44: Results expectation 1.1 and 1.2

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E1.1	<ul style="list-style-type: none"> <li>- A highly developed RIS enables the formulation of innovation policies.</li> <li>- A moderately developed RIS enables the formulation of innovation policies.</li> <li>- A weakly developed RIS constrains the formulation of innovation policies.</li> </ul>	Not supported	Not supported	Not supported	Not supported	<b>Not supported</b>
E1.2	- Innovation policies aim at modifying and transforming the constraining parts of the RIS.	Partly supported	Supported	Supported	Supported	<b>Supported</b>

The RIS in Bern is only weakly developed and only few innovation policies have been formulated. At first sight, the case of Bern seems to support E1.1. The interview data, however, reveal that the Bernese economic development agencies perceive themselves not as an agent contributing to the stimulation of innovation. Some cluster formation strategies are being formulated with the primary aim to stimulate inter-firm networks. The most promising innovation strategy is the establishment of a public private partnership in the medical technology cluster that unites all actors from the triple helix. In that sense, innovation policies target the fragmented RIS and are not constrained by the very same RIS. However, the formulation of innovation policies is by no means exploited in Bern:

No innovation policy targets the other RIS failures, i.e. organizational thinness, and few innovation policies try to stimulate knowledge interactions between the two RIS subsystems or target start-ups and entrepreneurship.

In Ottawa, the city officials interpret their role in economic development actively. The newest economic development agenda explicitly focuses on innovation. The main goals are to improve the linkages between the key actors of the 'triple helix' and to coalesce the fragmented RIS. Thus, innovation policies in Ottawa tackle the RIS failures. For example, the economic development agency Invest Ottawa tries to improve the linkages between the various fragmented business communities and to facilitate the growth of start-ups.

The case The Hague features similar dynamics as Ottawa. Both SCCs emphasize the importance of connecting all actors from the 'triple helix'. Both SCCs employ innovation policies as a strategic tool to tackle the economic weaknesses stemming from the RIS. For example, The Hague does not apply classical cluster policies but stimulates crossovers between existing clusters in order to increase the knowledge flows in the whole knowledge application and exploitation subsystem. Furthermore, The Hague tries to attract knowledge institutions in order to enhance the organizational thickness of the knowledge generation and diffusion subsystem. In no other case study it was similarly evident that the local administration formulate innovation policies to tackle the RIS failures.

DC rather resembles Bern than The Hague or Ottawa regarding expectation 1.1 and 1.2. In DC a well-developed RIS exist and I found a wide range of formulated innovation policies. The interview data reveal that the direction of causality equals expectation 1.2. Innovation policies aim to diversify the RIS towards technology-intensive sectors in order to counter the federal spending decline because public sector dependency is a major threat stemming from the RIS.

#### Theoretical and practical implications

The within-case analyses reveal that innovation policies are instruments to specifically develop the RIS by trying to cast off RIS failures. This finding supports the RIS literature's take on policy interventions. Innovation policies are a tool to overcome RIS failures (Asheim, Smith, and Oughton 2011; Cooke 2001; Martin and Trippel 2014). As putted forward by Tödtling and Trippel (2005), this thesis finds that policy actors, such as local governments or economic development agencies, can have a powerful role in shaping a RIS. Local public actors are especially well equipped to act as mediators tackling fragmentation between and within subsystems or in the words of Bradford and Wolfe (2013, 13) to act as "local brokers to 'connect and cluster' researchers, firms

and talent”. Thus, innovation policies have the potential to ‘*structure*’ the very economic structure of a locality and are thus a way for local policy makers to exert *agency*.

Beyond that, I found that innovation policies are mostly formulated in knowledge-intensive and technology-intensive sectors (Asheim, Smith, and Oughton 2011, 881). Roughly speaking, SCCs feature two types of economic sectors. The first type of sector are the capital city service sectors such as restaurants, hotels, retail and conference venues that commodify the high numbers of guests visiting the capital. The second type of sector are highly regulated and technology-intense sectors such as medical technology, energy, education, or defense. The latter type of sector points to the capital city as a “information cities” (Castells 1989), “national information brokers” (Abbott 1999; Abbott 2005) or “knowledge hubs” (Mayer and Cowell 2014). The case studies showed that most innovation policies in the four SCCs, with the exception of Bern, target the emerging cyber security sector.

Innovation policies appear in many different configurations. Yet, all four SCCs formulate some sort of cluster policies, but cluster strategies can take many forms: From stimulating the ‘triple helix’ in the cyber security cluster in The Hague, to stimulating inter-firm linkages in the ICT cluster in Ottawa, to organizing events for business leaders in the energy sector. Thus, the label cluster policies does by itself not contain much information about the exact configuration or quality of innovation policies. It seems that it befits local governments to formulate cluster policies for every local existing economic sector. Only in a second step, local governments evaluate their economic sectors and decide in which sectors they truly want to invest and which sectors are rather left alone. This observation can be illustrated with The Hague that pushes the cyber security cluster and, to a lesser extent, the international organization cluster, whereas the innovation policies in the oil & gas, the telecom & ICT and the financial cluster are marginal.

Another very prominent innovation policy concept that I stumbled over in several interviews is the idea of the ‘triple helix’, meaning the knowledge interactions of industries, knowledge institutions and the government (Etzkowitz and Leydesdorff 1995). Some interviewees directly referred to the concept causing a strange situation in which an academic concept is echoed from practitioners to academics. Other interviewees indirectly referred to the concept by highlighting the importance of these three actors for the local economy. This concept is especially relevant in SCCs given the presence of the government that other RIS largely lack. Second and following from the capital city function, SCCs are knowledge hubs due to the high presence of KIBS firms, intermediary organizations and knowledge generating organizations. The four SCCs have never been industrial cities. These cities were knowledge-based from the very beginning. Thus, the application of the “triple helix” concept perfectly fits to the economic profile of a SCC.

9.1.2. Image building

The within-case analyses support expectation 2 (see Table 45). The development of the RIS has a constraining or enabling effect on the image building strategies of SCCs. A weakly developed RIS constrains the opportunities to showcase itself as a business city as this would simply not be credible. A moderately or highly developed RIS enables to position itself as the capital city but as well as a thriving business city. A SCC able to employ such a two-dimensional image can strategically adjust its image building strategy to the target group. Even if we take into account a more nuanced gradation of the RIS development, i.e. the three stages, the same effect can be affirmed.

Table 45: Results expectation 2

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E.2	<p>- A moderately or highly developed RIS enables the formulation of both a capital city image building strategy and a business town image building strategy.</p> <p>- A weakly developed RIS enables the formulation of a capital city image building strategy, but constrains the formulation of a business town image building strategy.</p>	Supported	Supported	Supported	Supported	<b>Supported</b>

The RIS in Bern is weakly developed. Bern invests in building an image as the political center of Switzerland, even though no other Swiss city can contest this function. The capital city status is strategically applied to shift the focus away from Bern’s low economic dynamics towards its political importance. This image building strategy was successful insofar as Bern has been placed in the top-tier of Swiss metropolitan regions in the Swiss Federal Spatial Concept although Bern does not meet the stated criteria of a metropolitan area.

Ottawa features a moderately developed RIS. Image building in Ottawa changed several times, correlating with its economic ups and downs. Before the dot.com crash in 2001, Ottawa was able to build an image mostly around its vibrant high-tech sector but then Ottawa struggled with building up a new image for a long time because of the desire to copy the pre-crisis business city image. The city officials seem now to have accepted a twofold image building around the capital city status as well Ottawa’s economic sectors by presenting itself as a “G7 capital and high-tech

town”. They do not perceive the political and economic positioning strategy as mutually exclusive but rather try to come up with an integrated image of Ottawa.

In The Hague, image building activities can as well be linked to the development of the RIS. The strong international sector provides The Hague with a prestigious and stable image of the international city of peace and justice although it took a while to come up with the current branding. The city officials are confident that the emerging (cyber) security sector enables the City to gradually shift the perception of The Hague to be also known as an international business city.

The vibrant RIS in DC enables to strategically play with image building. DC leverages both assets, i.e. the capital city status and its highly developed RIS. For DC policy makers, it is not an either-or question but they adjust their image given the target group. Whereas towards the federal government, tourist or foreign investors, DC presents itself as the capital city and pushes this image to the extent that they sometimes refer to DC as the “capital of the free world”. Towards firms DC highlights its dynamic economic sectors and the numerous economic opportunities stemming from the spatial proximity to governmental organizations.

#### Theoretical and practical implications

The case studies reveal that image building cannot be drafted out of nothing but should be linked to concrete functions a city is able to perform. Cities cannot compete in interurban competition by referring to a RIS that has not yet developed as it is simply not persuasive. Thus, image building is not primarily about persuasion but about responsiveness to local conditions (Eshuis, Braun, and Klijn 2013, 508).

Capital cities possess an essential asset in the interurban position competition of cities because they can rely on their unique selling proposition as the political center. Economically weak SCCs can shift the focus away from their economic inferiority to their political superiority, a move that ordinary economically weak cities are not able to execute. The capital city function is thus a classical example of a very low locational substitutability (van der Heiden and Terhorst 2007, 242).

As I have outlined, image building in SCCs can be multidimensional. However, the two logics – capital city vs. business city – are often interrelated in reality and merged into one coherent image building strategy. The Hague refers to the presence of international organizations but searches for ways to enrich this prestigious brand with economic assets. The two North American capitals operate more aggressively by labeling itself “G7 and business town” or “capital city of the free world and business town”. This two-dimensionality can be played out strategically as image building can be adjusted to the target group (Eshuis, Braun, and Klijn 2013, 507; Harvey 2012, 3) which

seems to be the other characteristic of responsiveness. Whereas for visitors, foreign investors, sector organizations and the central government the capital city function may be relevant, towards firms a SCCs should highlight its economic dynamics and not its capital city image. Thus, image building is about *responsiveness* (Eshuis, Braun, and Klijn 2013, 507) but responsiveness seems to be, at least in SCCs, composed out of two main features: On the one hand, responsiveness is about crafting an accurate image of the local conditions, and on the other hand, responsiveness is about adjusting the image to the target group.

Regarding the economic-oriented image building strategy, the economic sectors are more important than the RIS in its totality. Dynamic industries embody the very image of business cities. Thus, functioning economic sectors can be exploited by an image building strategy that targets firms and thus can be merged with the acquisition strategy. In The Hague the upcoming cyber security cluster raises hopes to craft an international business city image, Ottawa was named “Silicon of Valley of the North” for a long time because of the bustling ICT sector in the early 2000s and DC is well known for the dynamics in its highly regulated sectors.

Whereas image building and acquisition fit together nicely, the case of Bern shows how a capital city image building strategy can be linked to the strategy of asking for public funds and compensation payments. The efforts to position itself as the political center and the following argumentative strategy that a strong political center is for the benefit of the whole country may give Bern a basis to justify federal support. The links between economic image building and acquisition as well as between political image building and asking for public funds and compensation payments supports the theoretical argument by Mayer et al. (2016) that distinguishes between two types of positioning strategies: the economical-orientated *attracting money* and the political-orientated *asking for money*.

### 9.1.3. Business prerequisites

The results stemming from the case studies regarding expectation 3 are mixed (see Table 46). Whereas high local tax autonomy, i.e. the right to tax personal and corporate income, does not lead to a sole focus on tax rates, low local tax autonomy leads to a focus on providing and developing land and real estate. In theory, high local tax autonomy should enable the formulation of all policy instruments in the business prerequisites category, but in practice, no SCCs engages in tax competition by lowering tax rates or offering tax reductions. The strategy of all SCCs is to develop land and real estate in order to enlarge the property tax bases. Furthermore, the two SCCs that are

able to collect personal income taxes try to attract residents by neighborhood development (DC) or increasing the quality of life (Bern).

Table 46: Results expectation 3

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E3	- High local tax autonomy enables to focus on income taxes and constrains other manifestations of the business prerequisites category.	Not supported			Not supported	<b>Not supported</b>
	- Low local tax autonomy constrains to focus on income taxes and enables to focus on the provision of land and real estate.		Supported	Supported		<b>Supported</b>

The finances of the City of Bern are under stress, impeding the lowering of the comparatively high tax rates. To compensate for high tax rates, the City of Bern invests in so-called soft-factors or quality of life issues such as neighborhood development, preservation of green spaces, cultural activities or international schools. The strategy is to become an attractive place for new residents despite high tax rates. Among others, this focus on enhancing the quality of life may be explained by the scarcity of developable land and the low threshold for referenda concerning development projects. A similar mechanism is at work in DC. The tax rates of the district are not very competitive. As a consequence, DC engages in regional tax competition not by lowering tax rates or offering tax breaks but by trying to enlarge its tax bases. Place-based neighborhood development should attract new residents and developing brown fields or underdeveloped areas into taxable real estate enlarges the property tax base.

In sum, both DC and Bern operate in a high local tax autonomy setting and both feature relatively high tax rates. Both SCCs are not engaging directly in regional tax competition by lowering tax rates or offering tax breaks but indirectly by becoming attractive for residents and thereby enlarging their tax base.

Ottawa and The Hague are only allowed to levy property taxes. As a consequence, both cities are active in the provision and development of land and real estate. The City of Ottawa puts a lot of efforts in filling and updating its most valuable real estate assets in downtown. The Hague provides and facilitates the construction of modern real estate such as the new business park. These physical developments in the cities can be explained by the importance of the property tax as the only substantial independent revenue.

### Theoretical and practical implications

I found that in The Hague, Ottawa and DC the provision and development of real estate and land is a major policy issue in their locational policies agendas. Bern, on the other hand, takes a slightly different route as it concentrates on improving the quality of life for residents. None of the SCCs engages in lowering tax rates despite regional tax competition. Thus, the difference in tax regimes is not solely capable to explain the characteristics in the business prerequisites category.

I turn to the revenue composition of the four SCCs to supplement the proposed causal mechanisms of expectation 4. Table 47 simplifies and compares the revenue side of the local budget in the four SCCs. Bern relies heavily on the personal income tax and it thus makes sense that Bern tries to attract new residents by focusing on the quality of life. In Ottawa, the property tax finances almost half of the local budget. Consequentially, the provision and the development of land and real estate are of highest priority. The Hague has few incentives to focus on tax bases because almost two third of the money stems from governmental transfers. However, they develop land and real estate. It may be the case that the property tax gives the city administration a little bit of leeway because this independently raised revenue comes with no strings attached. For DC, the property and personal income tax constitute important budgetary items.<sup>52</sup> This may explain the focus on infrastructure development, large scale real estate constructions as well as on neighborhood development.

Table 47: Local revenue comparison of the four SCCs

<b>Budgetary items</b>	<b>Bern (%)</b>	<b>Ottawa (%)</b>	<b>The Hague (%)</b>	<b>Washington, D.C. (%)</b>
Property tax	2.63	47.08	3.23	13.98
Personal income tax	42.47	-	-	11.64
Corporate income tax	9.92	-	-	3.21
Other taxes	4.05	0	0.99	15.02
Governmental transfers	15.26	18.74	63.59	28.26
Payments in lieu of taxes	-	6.21	-	-
User fees, assets, and miscellaneous revenue	25.67	27.97	32.19	27.89
Total	100	100	100	100

Sources: Bern: Federal Finance Administration 2016, data from 2014. Ottawa: Municipality City of Ottawa 2016, data from 2015. The Hague: Municipality The Hague 2014, 242-244, data from 2015. DC: Source: United States Census Bureau, 2015: State and Local Government Finance, data from 2013.

Together with national tax regimes, the importance of the respective taxes delivers a better underpinned explanation for the characteristics of the business prerequisites category. Especially

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<sup>52</sup> In the residual category 'other taxes', the sales and gross receipt taxes are important with 10.72 percentage points in DC.

property taxation directly incentives the development of land and real estate. However, I do not suggest that the focus on land and real estate development can be monocausally explained by tax rates. For example, the local governance regime is an important factor in explaining the land and real estate development orientation of some locational policies agendas (see subchapter 9.2). Yet, the direction of causality between taxes and the local governance regime is unclear.

9.1.4. Acquisition

Expectation 4 cannot be considered as supported because only in one case I could partly detect the proposed causal mechanism (see Table 48). Acquisition strategies seem to be based on a variety of local assets. The RIS is one out of many local assets although an important one. However, thriving economic sectors rather than the RIS *per se* are the bases for acquisition strategies.

Table 48: Results expectation 4

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E.4	<p>- A moderately or highly developed RIS enables the adaption of a profound and large-scale acquisition strategy.</p> <p>- A weakly developed RIS constrains the adaptation of a profound and large-scale acquisition strategy.</p>	Not supported	Not supported	Partly supported	Partly supported	<b>Not supported</b>

In Switzerland, the whole acquisition process is organized top-down. The City of Bern does not have much discretionary power in acquiring firms or investments, at least not on the international level. In the first step, cantons cooperate in national or intercantonal organizations but are in a second step direct competitors when a contacted firm gauges different bids. The City of Bern does not have stakes in this game until the canton may contact the city to inquire whether suitable infrastructure would be available. Thus, not the RIS but the Swiss MLG setting in which the cantons occupy a central role constrains profound and large-scale acquisition strategies.

Ottawa’s acquisition strategy is profound and large-scale but it is based as well on other local assets than only on its RIS. One out of three pillars of Ottawa’s acquisition strategy are local economic sectors. The other two pillars are praising Ottawa as a soft-landing spot to tap into the North American market plus the promotion of its high share of well-educated workforce as an

opportunity for companies to get access to a deep talent pool. Thus, Ottawa compensates or enriches its moderately developed RIS with other local assets.

In The Hague the acquisitions strategy is based on already existing sectors, namely energy, telecom, business services and particularly (cyber) security. The Hague targets firms in sectors that already have a strong foothold in The Hague. The same is true when acquiring international organizations. The already present cluster of prestigious international organizations is the best asset in luring new organizations to The Hague.

DC adopts a profound and large-scale acquisition strategy because different acquisition tools are in use and DC targets the national as well as different international markets. However, the acquisition strategy not only bases on the highly developed RIS. The combination of thriving clusters in highly regulated industry markets as well as the prestigious US capital city status enables such a profound and large-scale acquisition strategy.

#### Theoretical and practical implications

The within-case analyses have revealed that acquisition strategies are based on a variety of local assets. The RIS is certainly an important asset. However, not the RIS in its totality is leveraged in the four SCCs. Rather the most thriving economic sectors are suitable for acquiring firms and investments. Thus, economic development agents are not constrained by the RIS but enjoy some degree of *agency* when drafting acquisitions strategies (see subchapter 9.2). Similar to the image building locational policy, the capital city status can be leveraged as an asset for firms that seek proximity to federal government organizations.

Acquisition is in fact a big business. In the Netherlands and Switzerland international acquisition is carried out by consolidated agencies such as the Netherlands Foreign Investment Agency or the Switzerland Global Enterprise. In a next stage, sub-national and local jurisdictions can hand in their competitive bids. This resembles the two step logic of firms' locational choice proposed by Cohen (2000): In a first step, firms choose a region and in the second step the firms glance around for a specific location within the chosen region. The two North-American SCCs acquire rather independently or form strategic ad hoc alliances with other jurisdictions. Both DC and Ottawa invest considerable efforts in this task. Among others, they establish contact offices in foreign markets, set up incubators for foreign firms wishing to tap into the own local market, hire brokers and side-locators and are present at exhibitions and trade shows.

The size of the country may explain these differences. In this international competition, the small cities of Bern and The Hague are economically too marginal to sustain in this competition. Thus,

the national level or in some instances the second-tier level steps in to increase economic leverages of smaller European cities. The price the two European SCCs pay for this service is the delegation of agency. In a sense, acquisition in small countries is delegate to higher-tier government as suggested by the principle of subsidiarity.

9.1.5. Regional coordination

The within-case analysis largely supports expectation 5.1 (see Table 49). It is particularly *vertical* institutional fragmentation and in a second step high local tax autonomy that hinders coordination. Vertical institutional fragmentation increases the complexity of regional coordination whereas high local tax autonomy is a cause for competition between jurisdictions within a region. However, an interaction effect between the two explanatory factors is at work. Only in vertically institutional fragmented FUA's, local tax autonomy unfolds its full negative effect on regional coordination. Thus, vertical institutional fragmentation must be considered an upstream explanatory factor. However, I do not want to propose an institutional determinism because regional coordination in its essence is also a matter of politics.

Table 49: Results expectation 5.1

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E.5.1	<ul style="list-style-type: none"> <li>- High institutional fragmentation and high local tax autonomy constrain regional coordination.</li> <li>- High institutional fragmentation constrains and low local tax autonomy enables regional coordination what leads to negative coordination.</li> <li>- Low institutional fragmentation enables and high local tax autonomy constrains regional coordination what leads to negative coordination.</li> <li>- Low institutional fragmentation and low local tax autonomy enable regional coordination.</li> </ul>	Supported	Partly supported		Supported	Supported

In Bern I found negative coordination. The jurisdictions show little interest to create coordination synergies but they simultaneously do not engage in harmful beggar-my-neighbor behavior. It seems that low vertical institutional fragmentation enables the Canton of Bern to diffuse a consolidating order on the FUA Bern. All jurisdictions in the FUA Bern enjoys the same amount of local tax autonomy, which creates a level playing field. However, high local tax autonomy seems to disincentive jurisdictions to engage in locational policies because tax revenues are at stake. The within case analysis also points to political factors that may as well explain the reluctance to engage in regional coordination such as fear of ceding local autonomy and a political ideology divide between the city and the agglomeration municipalities. The case of the Capital Region Switzerland also supports expectation 5.1. The expanded perimeter leads to vertical institutional fragmentation increasing not just the complexity in decision-making but also the differences in the tax settings that creates a rather unlevel playing field where jurisdictions compete more fiercely.

I also found negative coordination in the case of Ottawa that is primarily caused by vertical institutional fragmentation, i.e. the provincial border that cuts through the very middle of the FUA Ottawa-Gatineau. The provinces bring along different political systems and issues of Quebec's status within Canada manifesting the very political struggles of Canada in Ottawa. However, there is no beggar-my-neighbor behavior even though Ottawa and Gatineau display some variance in corporate income tax rates. Corporate income taxes are the prerogative of the provinces what restricts Ottawa and Gatineau to engage in tax competition. Thus, it is mainly the vertical institutional fragmentation that explains negative coordination in the Ottawa-Gatineau region.

In The Hague, the cooperation in the Metropolitan region Rotterdam The Hague (MRTH) seems to develop into positive coordination that can be mainly explained by both the absence of vertical institutional fragmentation as well as low local tax autonomy. All municipalities that cooperate within the MRTH belong to the Province of South Holland. The establishment of the MRTH was a strategic move of the two big cities Rotterdam and The Hague to gain more autonomy from the Province of South Holland. Thus, the partnership would not have happened if the cities belonged to different provinces. However, the municipalities still compete moderately in acquiring firms because Dutch municipalities have eager to bring local residents into employment in order to save social benefit expenditures.

In the DC region, the different jurisdictions engage in a fierce competition or beggar-my-neighbor behavior that can be explained by two expected explanatory factors. The DC region is a typical case of high vertical and horizontal institutional fragmentation. Its core – the district – only accounts for about 10% of the population. The three states in the FUA and the district have different political settings as well as different tax regimes. It is the interplay between vertical

institutional fragmentation and high local tax autonomy that can explain this fierce regional competition. High local tax autonomy enables jurisdictions to offer tax benefits and other financial incentives that make the whole economic dynamic very competitive. Vertical institutional fragmentation in combination with high local tax autonomy creates an unlevel playing field that incentives competition between jurisdictions.

#### Theoretical and practical implications

The within-case analyses have revealed that second-tier borders are powerful institutional constraints for regional coordination. In the DC region and the Ottawa-Gatineau region, inter-municipal coordination fails due to second-tier borders dividing the regions. The cases of Bern and The Hague illustrate that the vertical order matters for integration. In these cases, the canton respectively the province emulates a consolidated spatial order and plays an important role in fostering regional coordination. In spite of fragmentation at the municipal level, the upper-tier governmental entity serves as a proxy for consolidation which facilitates coordination. This finding is a piece of bad news for the category of SCCs, as they are prone to be located in a situation with high vertical institutional fragmentation (Slack and Chattopadhyay 2009). Horizontal institutional fragmentation did not display much of an influence in the four cases, but it seems reasonable to assume that horizontal institutional fragmentation increases transaction costs and collective action problems such as free-riding and opportunistic defections from voluntary agreements (Feiock, Steinacker, and Park 2009).

Also the second explanatory factor proved to be meaningful. Generally, tax competition and its underlying rationale of ensuring efficient and lean government entities via competition are different to the underlying rationale of coordination as a welfare theoretical concept (Scharpf 1994). More specifically, the cases point to an interaction effect of two explanatory factors: High tax autonomy is an obstacle for coordinating locational policies but it only unfolds its full negative effect in vertically fragmented FUAs. Thus, the vertical institutional fragmentation is an upstream explanatory factor. The combination of both institutional factors creates an unlevel playing field for local tax competition. This finding supports the argument of Leitner and Sheppard (1999, 242): “When cities in competition face unequal conditions of possibility [i.e. an unlevel playing field] these not only affect the nature of local initiatives but also work to undermine the putative general benefits of entrepreneurial strategies: (...), and creating zero-sum or negative-sum game of ‘beggar thy neighbor’”.

While this comparative analysis corroborates the importance of the two institutional explanatory factors, the cases also reveal that politics as well as the capital city status may matter in regional

coordination. In its essence, coordination is actually about agency, interests, and power relations. In Bern, the decision makers in the municipalities feared to lose their autonomy as it would endanger their political positions. This fear is enhanced by the partisan divide between the core city and the agglomeration municipalities. In Ottawa, the separatism issue of Quebec is an important barrier to coordination. In the case of The Hague, the new coordination body between Rotterdam and The Hague has to be seen in the light of the political power play between the province and its two biggest cities. And in DC, different political settings of the three states as well as the special governing situation of the District of Columbia and national state interests all aggravate regional coordination. Hence, politics is a factor in its own right since “cooperation results from bargaining and negotiating among the officials of affected jurisdictions” (Dowding and Feacock 2012, 37). Thus, an in-depth analysis of regional coordination in SCCs should incorporate political factors to do justice to the simultaneity of structure and agency.

The capital city function may facilitate regional coordination. I found that the central government might nudge jurisdictions to regionally coordinate policies either via ‘carrots’ or via ‘sermons’ (Bemelmans–Videc, Ray, and Vedung 1998). Via ‘carrots’: The central governments may allocate funds for certain functions to regional coordination organizations instead of individual municipalities or second-tier entities (e.g. provinces, states or cantons). The Dutch central government, for example, re-directed public transportation funding to the MRTTH instead of the province. Via ‘sermons’: In purpose-built capital cities the central level is likely to have already a foothold via land use agencies. These agencies can facilitate better regional coordination by bringing the jurisdiction to the table. In Ottawa, the NCC facilitated talks between Ottawa and Gatineau. The structural idiosyncrasy of SCCs, i.e. the higher central government interests in the capital function, therefore may constitute an opportunity structure for regional coordination.

9.1.6. Coordination

The cases do not support expectation 5.2 (see Table 50). Coordination is not able to tackle institutional constraints stemming from the political-institutional setting. Only in Ottawa, I found some traces of overcoming local autonomy constraints. In the others SCCs, coordination efforts either failed or there is no interest in overcoming these constraints. Predominantly, SCCs settle with these institutional constraints and focus on discretionary locational policy instruments.

Table 50: Results expectation 5.2

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
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E5.2	- Coordination aims at overcoming the constraining parts of the MLG setting.	Not supported	Partly supported	Not supported	Not supported	<b>Not supported</b>
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Bern is only constrained in the local governance dimension dominated by political actors. Private actors are fragmented as they pursue their interest via various organizations. Public actors show no desire to increase the interaction with private actors and they don't see it as their task to integrate other stakeholders in the process of formulating locational policies. Thus, business actors have a hard time finding access points to the local governance regime.

The local autonomy of Ottawa is constrained because of federal influence via the NCC and low local tax autonomy. Furthermore, the vertical institutional fragmentation in the FUA Ottawa-Gatineau hinders coordinated locational policies formulation in the region. Coordination in Ottawa is not able to overcome vertical institutional fragmentation or low local tax autonomy. As an exception, the new governance model between the city hall and the NCC that intensifies and institutionalizes periodical meetings may be a way to deal with the local autonomy constraints ensuing from the NCC.

Low local tax autonomy constrains The Hague in the formulation of locational policies. Coordination is not able to alter this hardnose institutional constraint. As an alternative, The Hague concentrates on discretionary locational policy instruments such as the development of land and real estate.

DC faces many capital city specific constraints and the FUA is vertically institutionally fragmented. Regional coordination is not able to overcome vertical institutional fragmentation. The political feasibilities of easing the capital city specific constraints are low since they require constitutional amendment. Thus, DC is not able to overcome constitution-based capital city specific constraints but in some instances DC succeeded in negotiating federal compensation payments for these capital city specific constraints.

#### Theoretical and practical implications

Coordination is not able to overcome institutional constraints. In the outline of expectation 5.2, I chose the wording overcome instead of modify or transform because I anticipated the difficulty of 'structuring' hardnose institutional constraints. Overcoming means finding pathways to alleviate the constraints or pathways to bypass the constraints. However, only in Ottawa I found some instances of overcoming local autonomy constraints. In the other SCCs, coordination efforts either failed such as the regional coordination platforms in the DC region, or there is no interest in

overcoming these constraints such as in the local governance regime in Bern. Predominantly, SCCs settle with these institutional constraints and concentrate on discretionary locational policy instruments.

The within-case analysis reveals that ‘structuring’ the MLG setting is not possible contrary to the ‘structuring’ of the RIS. It seems logical to assume that the local governance dimension would be the easiest dimension ‘to structure’ because a local governance regime is as much a product of agency as it is of structure. However, the cross-sectional comparison in this thesis does not look at developments over time. Thus, I could not systematically assess the aforementioned assumption. In Bern, the only case in which the local governance dimension constrains the formulation of locational policies, the authorities have no interest in integrating external actors in the locational policies formulation process.

If I would expand the case selection or change the policy field, more examples of successful ‘structuring’ the MLG setting may appear. For example, the city of Ulm in South Germany shares an economic development agency with the neighboring city Neu-Ulm that is located in another German federal state (Kaufmann and Arnold 2017). This astonishing coordination in a FUA that is vertically institutional fragmented at its very heart reveals that it is possible to overcome vertical institutional fragmentation. Regarding policy fields, it seems that jurisdictions are reluctant to coordinate locational policies because potential tax revenue is at stake. Cases like DC or Bern suggest that regional coordination is more likely to succeed in policy fields such as transportation, emergency response, environmental technology or cultural activities. This is a tragic dilemma insofar because metropolitan regions seem to be the decisive perimeter in the international competition of localities (Scott 2001; Hall and Pain 2006; Florida, Gulden, and Mellander 2008). Following from that, the formulation locational policies on the regional level is crucial to sustain in international competition.

#### 9.1.7. Public funds and compensation payments

The within-case analyses support expectation 6 (see Table 51). The degree of local autonomy influences the priority of asking for public funds and compensation payments in a SCC’s locational policies agenda. More precisely, asking for public funds is enabled by low local tax autonomy, whereas asking for compensation payments is enabled by the intensity of capital city specific constraints.

Table 51: Results expectation 6

Nr.	Expectation	Bern	Ottawa	The Hague	DC	Overall
E6	- Low local autonomy enables to ask for public funds and compensation payments.  - High local autonomy constrains to ask for public funds and compensation payments.	Partly supported	Supported	Supported	Supported	<b>Supported</b>

Bern is treated like any other Swiss municipality and thus does not have to cope with capital city specific constraints. The federal government believes that the City of Bern and its agglomeration profits from the strong presence of the confederation. As a consequence, Bern is constrained to ask for compensation payments based on the capital city status because there are no arguments at hand or because the federal level rejects the arguments. Given that the local tax autonomy is high in Switzerland, the attraction of public funds plays a minor role. Anyhow, the coordination platform Capital Region Switzerland was also established as a tool to tap into competitive funds from the federal level by stressing the political importance of the capital city region for whole Switzerland.

In Ottawa, the attraction of public funds is an important element of the locational policies agenda. Low local tax autonomy leads to a higher dependency on governmental money transfers. As the only SCCs in the sample of this thesis, Ottawa receives payments in lieu of taxes (PILTS). These federal payments can be interpreted as a compensation for capital city specific constraints because PILTS were enacted at the same time as the federal competencies over its capital city were extended.

As any other Dutch municipality The Hague features a low local tax autonomy which makes tapping into public funds important for sustaining the local budget. The Hague even established an own specialized municipal desk for attracting diverse public funds. It does not face any capital city specific constraints impeding the possibility to ask for compensation payments.

DC faces extraordinary capital city specific constraints. City officials and the federal government negotiate local autonomy issues since the beginning of DC's home rule in 1973. The capital city specific constraints are based on the US constitution what makes the political feasibility of easing these constraints unlikely. Thus, decision makers in DC lobby to receive compensation payments and have succeeded several times.

### Theoretical and practical implications

Different logics underlie asking for compensation payments and tapping into public funds. Whereas compensation is tied to the capital city status and thereby has to be justified based on constraints ensuing from that status, tapping into public funds is tied to the country specific local tax autonomy.

Ottawa and DC both receive compensation payments whereas the two European SCCs do not receive this type of federal money. The local autonomy is constrained by a federal agency that represents federal interest over federal land in both North American capitals. In DC, the local autonomy constraints are more profound to the extreme that the Congress has de facto oversight over local policy-making. In neither of the two European SCCs a national land use agency exists nor is there a mechanism for the federal level to intervene in the local autonomy exist.

This thesis suggests jumping one analytical step back in order to analyze why some SCCs face more capital specific constraints than others. I propose that the status of the city prior to its selection as the capital should be considered to explain capital city specific constraints. Both European SCCs were important cities in mediaeval times. Both cities exercised an important function in the national urban system at the time when they were chosen as the nation's capital. Following from that, it seems unlikely that neither Bern nor The Hague would have accepted cutbacks in their local autonomy brought along by the capital city status. In contrast, the two North American capitals have been built from scratch or have been heavily developed to serve as the nation's capital. The former seem to enjoy more local autonomy whereas the latter face more capital city specific constraints in their local autonomy. The case studies have revealed that compensation, for their part, should offset these local autonomy restrictions. Thus, it is important to differentiate between purpose-built capitals and purposely-selected capitals when studying compensation of capital city related costs and lost income. This differentiation has explanatory power when studying the local autonomy of SCCs and thus seems to enrich the existing political-institutional capital city categorizations proposed by Rowat (1973; see also Harris 1995; Slack and Chattopadhyay 2009).<sup>53</sup>

The importance of public funds is dependent on the degree of local tax autonomy. This institutional feature is detached from the capital city status. If we take a look at the revenue composition of the

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<sup>53</sup>Rowat (1973) distinguish between three types of legal statuses or governing structures of capital cities: (1) a capital city that is located in a special district, (2) a capital city as a city-state that is simultaneously a constitutive unit of their nation, and (3) a capital city that is located within a province, state or canton with no special status (see also subchapter 3.5.1).

local budgets, we see that public funds are especially important in The Hague as they make up 63.6% of the local revenue. In Ottawa, the property tax constitute almost half of the revenue and governmental transfers make only 18.7% of the revenue. Accordingly, in The Hague the attraction of public funds is of greater importance than in Ottawa.

In both The Hague and Ottawa governmental economic development funds are awarded competitively. These economic development funds come with strings attached, i.e. awarding of funds based on conditionalities, which is an effective downward steering mechanism of higher-tier governments. What I found is that such a higher-tier governmental funding leads to a local implementation of higher-tier governmental economic development policy paradigms. In The Hague the central government's innovation policy paradigm, which is to implement cluster approaches in key sectors and to incorporate all actors of 'triple helix', can be found as a crucial element of the locational policies agenda. In Ottawa, the conditionality of matching funds leads to private-public partnership models in economic development initiatives.

These types of public funds can be described as 'carrots' or subsidies. Subsidies that distribute material resources are labeled 'carrots'. Addressees of 'carrots' are not obligated to make use of the resources because they may hesitate to take the measures required to get it (Vedung 1998, 32). By controlling the material resources, higher-tier governments have influential remunerative power (Etzioni 1975, 55) over local locational policy-making via 'carrots'. These "economic tools always leave the subjects of governance a certain leeway within which to choose by themselves whether to take an action or not" (Vedung 1998, 32). Thus, for SCCs in a setting with high local tax autonomy, i.e. for Bern and DC, this leeway is larger, than for SCCs in a setting with low local tax autonomy, i.e. for Ottawa but especially for The Hague. The real problem of such a dependency on higher-tier governmental money is that SCCs implement locational policies that are orientated to maximize tax revenue of these higher-tier governments and do not necessarily benefit the local level. As a consequence, local governments may lukewarmly implement these policy paradigms because they may not benefit much from the yields in the long run. Thus, I found similar effects as proposed by Jessop and Sum (2000, 2293): A higher dependency on higher-tier governmental transfer may bring local governments in an awkward dilemma between bottom-up initiatives that would benefit the locality and accepting resources that come with restrictive strings attached.

#### 9.1.8. Summary of the findings

The comparison brought to light four explanatory factors that all account for parts of the examined locational policies agendas in SCCs (see Table 52). Especially local tax autonomy is a powerful

factor for explaining whole locational policies agendas. Given the neo-institutional framework of this thesis, these four explanatory factors represent the institutional context that enables or restricts the formulation of locational policies in SCCs. Thus, the assumption derived from the varieties of capitalism concept matter. The political-institutional setting proofed to contain more explanatory power than the economic orientation. However, I do not propose a deterministic institutional explanation of locational policies agendas in SCCs. I found that local decision makers have some leeway to gauge locational policy options and that locational policies can also target structural constraints (see subchapter 9.2).

Table 52: Institutional factors to explain locational policies

Institutional explanatory factors	Locational policies
Local tax autonomy	- Business prerequisites - Tapping into public funds (public funds and compensation payments)
RIS development	- Innovation policies ( <i>Structuring</i> ) - Image building
Capital city specific constraints	- Compensation payments
Vertical institutional fragmentation + local tax autonomy	- Regional coordination

Two similar factors had been identified as potential additional explanatory factors in the case selection: the inhabitants of the city, FUA or country and the size of the country (see subchapter 4.1). Only in acquisition size matters. Acquisition strategies are often consolidated in the Netherlands and Switzerland because cities in these two countries would be too small and thus too marginal to compete in the international competitive acquisition business. All in all, inhabitants and the size of the country are negligible factors to explain locational policies formulation in SCCs.

Two main types of locational policies agendas

Different local tax autonomy settings account for differing incentive structures what leads to two main types of locational policies agendas. On the one hand, low local tax autonomy leads to a *development and public funds* locational policies agenda that aims to enlarge its property tax base and tries to attract higher-tier governmental funds. On the other hand, high local tax autonomy triggers a *maximizing taxes* locational policies agenda that focuses on increasing the tax revenue from different types of tax instruments. Thus, this thesis has revealed that local tax autonomy is a real game changer for locational policies agendas. These two types of locational policies agendas are largely detached from the capital city status and thus may be generalizable for similar cities in the relevant national urban systems.

Table 53: Two main locational policies agendas

<b>Locational policies agenda</b>	<b>Development and public funds</b>	<b>Maximizing taxes</b>
Explanatory factors	Low local tax autonomy	High local tax autonomy
Main component(s) of locational policies agenda	1. Property tax 2. Attracting public funds	1. Taxes - Personal income tax - Corporate income tax - Property tax
Rationale to focus on job growth	Avoiding spending	Generating income
Examples	Ottawa, The Hague	Bern, Washington, D.C.

The *development and public funds* locational policies agenda focuses on enlarging the property tax base and attracting public funds. Property taxes occupy such a prominent role because the other tax bases are largely the prerogative of higher-tier government's. As a consequence, infrastructure and real estate development is prioritized in order to boost the property tax base. Public funds are an important local revenue because a lot of local tax bases are restricted. The *development and public funds* locational policies agenda brings along three important implications. First, higher-tier governmental funds often come with strings attached, i.e. certain conditionalities that decree how to use these funds. Through these kinds of 'carrots' (Bemelmans–Vidéc, Ray, and Vedung 1998), higher-tier economic development paradigms disseminate from the central to the local level. These policy paradigms are formulated on higher-tier governmental levels that operate within a different incentive structure, i.e. different tax setting, than the local level. As a consequence, local governments may lukewarmly implement these policy paradigms because they may not benefit much from the yields in the long run. Second, local governments heavily focus on developing land, real estate and infrastructure. Such locational policies agendas may occur with a growth-oriented local governance regime (see subchapter 9.2.2). Third, the main locational policies goal in The Hague and Ottawa is to generate jobs. The reason for this goal is to avoid social assistance expenditures for their local residents, since the local governments do not profit from job growth via corporate income taxes or personal income taxes. Thus, The Hague and Ottawa favor job growth out of an *avoiding spending rationale*.

Bern and DC feature a *maximizing taxes* locational policies agenda. Local governments in a high local tax autonomy setting can yield benefits from their locational policies activities in form of a variety of tax revenues. These two cities also strive for job growth but out of a *generating income*

*rationale*. Job growth enlarges the corporate income tax base and potentially also the personal income tax because some employees prefer to live close to their place of work. Thus, DC and Bern may directly yield the benefits from their locational policies activities in form of tax revenues. In general, Bern focuses rather on the personal income tax base by improving the quality of life, whereas DC focuses on the property tax base by developing large-scale construction sides as well as the personal income tax base by place-based neighborhood development. Since both SCCs do not feature competitive tax rates compared to suburban jurisdictions, it seems that they capitalize on core city advantages such as diverse neighborhoods, dense infrastructure, distinctive urban lifestyles, manifold opportunities, and cultural activities.

## 9.2. Politics, local governance and agency in the formulation of locational policies

The findings in this thesis represent so far institutional explanations of locational policies formulation. Until now, I have only slightly tackled locational politics, i.e. power, interests and governance that stand behind locational policies formulation. However, I do not propose an institutional deterministic explanation of locational policies agendas in SCCs. I invest a subchapter to reflect on local governance in SCCs and agency in the formulation of locational policies.

### 9.2.1. Agency in the formulation of locational policies

I introduced the concept of ‘structuring’ to theorize agency of local decision makers in the formulation of locational policies. ‘Structuring’ is based on a dualistic, reciprocal view of the structure-agency relationship by arguing that structures indeed shape individual actions but individual actions can simultaneously shape structures (Abrams 1982; Giddens 1984; Imbroscio 1999, 46–47). In this thesis, the formulation of locational policies that alter the very institutions that enable or restrict the formulation of locational policies is conceptualized as a form of agency. I expected that innovation policies and coordination have the potential to engage in ‘structuring’: Innovation policies was expected to modify or transform RIS failures and coordination was expected to overcome constraints in the MLG setting. Thus, I expected that these two locational policies may serve as strategic and anticipatory policy options and thus valuable locational policies tools beyond place-based and path-dependent constraints.

The cases have revealed that innovation policies live up to this pivotal task. Innovation policies have the potential to tackle RIS failures. What makes innovation policies so expedient is their ability to kick-start positive chain-reactions. By developing the RIS, innovation policies indirectly enable the formulation of locational policies that would have been constraint by an only weakly developed RIS. For instance, I found in this thesis that a weakly developed RIS constrains an image -building

strategy that showcase the city as a business center. Innovation policies have the potential to indirectly enable such an image by developing the RIS. I found no evidence, however, that coordination would be able to similarly structure the MLG setting (see subchapter 9.1.6).

Besides to ‘structuring’, local policy makers can gauge locational policy options what also constitutes a form of agency. Locational policies form a category for a wide array of policies that enhance the competitiveness of a locality. Thus, if the formulation of a type of locational policy is restricted, local policy makers may fall back on alternative locational policies. Thus, the structural constraints does not coerce local policy makers but structural constraints give local policy makers more or less leeway in formulating locational policies. For example, acquisition strategies may leverage a variety of local assets such as being the capital city, its geographical location, or the talented workforce. Similarly, low local tax autonomy may lead to a prioritization of different locational policies. Thus, when local decision makers gauge locational policy options, they operate within structural constraints but they do not alter these structural constraints. Clearly, ‘structuring’ is a far stronger agency mechanism than gauging.

9.2.2. Local governance in secondary capital cities

Local governance types in the four SCCs are discussed and compared by focusing on the interaction between public and private actors in the formulation of locational policies. The findings are summarized in Table 54.

Table 54: Summary of local governance regimes

	<b>Bern</b>	<b>Ottawa</b>	<b>The Hague</b>	<b>DC</b>
<b>Public actors</b>	Act dominant	Act as brokers	Act as brokers	-Act inclusively - Rather weak position
<b>Private actors</b>	Fragmented	- Fragmented - Developers are important	A few well established organizations	- Well-organized and powerful - Developers are important
<b>Interaction</b>	Low, due to public actors domination	High, due to an inclusive local government	High, due to institutionalization of interaction	High, due to powerful private actors and their informal contacts

In Bern, political actors dominate the local governance regime. The city hall and the cantonal administration are the relevant political organizations in the formulation of locational policies. Additionally, the political coordination bodies such as the Regional Sub-Conference Economy or

the Capital Region Switzerland constitute arenas to discuss and coordinate locational policies. The various private sector groups interested in promoting Bern as a locality operate rather isolated from each other, even though they share policy goals. The interaction between the public actors and private actors is limited. Political actors do not provide an institutionalized access for these private interest groups to engage in locational policies formulation.

In Ottawa, the city administration and the economic development organization Invest Ottawa coordinate the formulation of locational policies in an integrative manner. Like brokers, these public actors are committed to bring all relevant local actors such as big firms, business organizations and universities into the locational policies formulation process. The private business community in Ottawa is fragmented. The different economic sectors are rather loosely connected. The Chambers of Commerce or the Business Improvement Districts are not able to consolidate the business community. The interviewees point to developers as most influential private actors in the absence of a well-organized business community. These developers seem to be important to support the growth-oriented locational policies agenda of Ottawa.

Corporatism and consociationalism as the two main characteristics of the Dutch policy-making system can also be traced in locational policy-making in The Hague. The city hall takes the role of a broker that coordinates the institutionalized talks between the major interest group organizations in the Administrative Consultations for Economic Affairs (*BOEZ*). But this integrative role of the city goes beyond these institutionalized interactions. In different economic sectors, the city hall facilitates interactions between the most important actors of the 'triple helix'. Thus, in The Hague the interaction between public and private actors in the locational policies formulation process is well institutionalized.

The district administration does not hold a similar central position in formulating locational policies as local governments in the other three SCCs. The comprehensive locational policies activities of the district only started in 2012. However, the locational policies have been formulated in a profound consultation process integrating relevant business interest groups, sector organizations and universities. The private organizations in DC are well organized, powerful and thus equipped with an easy access to public leaders. Thus, the interaction between public and private leaders seems to work well via informal contacts despite lacking an institutionalized access to the district administration. However, the democratic legitimacy of these public-business entanglement seems questionable albeit this thesis does not address such questions. Especially the developers have been mentioned in the interviews as powerful agents in the local governance of economic development. Infrastructure projects and real estate development are projected to be the major drivers of job and

wealth creation in the district. Thus, the local governance regime in DC supports the development-orientation of its locational policies agenda.

#### Government led regimes in secondary capital cities

Local governments occupy a central role in SCCs' local governance regimes what stands in contrast to the 'social production model'. In Atlanta, the business elites provided crucial resources such as money, land, and technical expertise, whereas only the electoral votes stemmed from the public actors (Stone 1989, 192–193; 197). Such a local governance description clearly differs from the realities in SCCs, where, with the exception of DC, local governments are crucial and business elites rather marginalized. Whilst in Bern public actors exploit this position to exercise a dominate role, the city administrations in The Hague and Ottawa operate in an integrative and coordinative manner.

Business actors in SCCs are not able to provide such a variety of resources as described by Clarence Stone. In their essence, SCCs are government towns that lack an industrial tradition. In such a context, a resource-rich and thus powerful business elites could not develop. The only powerful business actors in government cities are developers. However, I only made this observation in North American capitals. In both of the European SCCs, developers do not have such a leverage on locational politics and locational policies. The locational policies agenda of The Hague also focuses on land and real estate development, but these activities do not translate in a strengthening of developers in the local governance regime. The limited role of developers may be explained by the corporatist traditions of policy-making in The Netherlands, in which only few private sector organizations have institutionalized access to public actors. In Bern, private actors are all together marginalized. This difference raises the following question: Why are developers important in North American SCCs but not in European SCCS? I suggest to consider three factors to explain this transatlantic divide.

First, business elites and local public actors are generally closer entangled in the North American context than in Europe. This rather general observation was made in many cross-Atlantic studies of local regimes (e.g. DiGaetano and Klemanski 1999; Harding 1994; Harding 1995; Pierre 2005; Pierre 2014).

In a similar vein, the Varieties of Capitalism concept distinguishes between two ideal types of political economies. The Liber Market Economies (LMEs) can be found in the US or Canada. LMEs coordinate their activities via competitive market arrangements, or if they fail via hierarchies, what gives market players more stakes in the political game. Coordinated Market Economies (CMEs) can be found in the Netherlands or Switzerland. CMEs coordinate their activities through

non-market relationships, networks, and collaborative arrangements what gives only the few institutionalized private actors a privileged role.

Second, both North American countries are settler countries. Cities were at the forefront of this territorial expansion. These cities were originally founded as centers of trade and commerce and thus based on individual profit-seeking. The early city founders were local boosters who used city governmental power to promote local growth. Cities were corporations and the cities followed a politics of growth (Judd and Swanstrom 2015, 3–4). Thus, developers were needed to satisfy the demand for urban growth and they were from the beginning part of the North American urban history.

Third, property taxation is more important in countries of the former British Empire compared to OECD countries with a different background (Brühlhart, Bucovetsky, and Schmidheiny 2015, 1138–39). In Ottawa property tax makes up 47 % of the revenue side and in DC it accounts for 14% of the local revenue what is more than every other tax category. These are high local budget shares especially if we consider that the local property tax base is restricted in capital cities given tax exemption of federal and international property.

A combination of these factors is likely to explain both the importance of developers in the North American SCCs as well as the rather aggressive pursuit of a growth-orientated locational policies agenda. Developers and such a growth-oriented locational policies agenda seem to mutually reinforce each other. In sum, I found government led local governance regimes in all SCCs but only North American SCCs feature a government led growth-oriented regime in which developers occupy a central role.

### 9.3. Generalization of the findings

This subchapter aims to generalize the findings of this thesis to other SCCs as well as some of the findings to other secondary cities. An important part of case study research is to shed light on the larger class of cases in the population (Gerring 2007, 20; Blatter and Haverland 2012, 69). Most findings should bear some significance for the population of SCCs in OECD states. I furthermore relate the findings to SCCs outside OECD states. The generalization to other secondary cities is done with more caution since the SCCs feature a specific political economy. Therefore, I generalize to what I call state-anchored secondary cities (SASCs) which feature a political economy that is characterized by a strong state presence. Only if explanatory factors or locational policies are not associated with the capital city function, I try to generalize the findings to SASCs. Table 55 reports the main findings of this thesis and outlines possible dimensions of generalization.

Table 55: Main findings and their possible generalizations

<b>Explanatory factors</b>	<b>Locational policy</b>	<b>Dimension of generalization</b>
Local tax autonomy	Business prerequisites	State-anchored secondary cities
	Tapping into public funds (public funds and compensation payments)	State-anchored secondary cities
	Regional coordination (together with vertical institutional fragmentation)	State-anchored secondary cities
RIS development	Innovation policies ( <i>Structuring</i> )	State-anchored secondary cities
	Image building	Other secondary capital cities
Capital city specific constraints	Compensation payments (public funds and compensation payments)	Other secondary capital cities
Vertical institutional fragmentation	Regional coordination (together with local tax autonomy)	State-anchored secondary cities
Local governance regime	Government led infrastructure and land development regime	Other secondary capital cities

### 9.3.1. Generalization to other secondary capital cities

#### RIS development and image building

I found in expectation 2 that a well-developed RIS enables SCCs to position themselves as the capital but as well as a thriving business city. In contrary, a weakly developed RIS constrains SCCs to position themselves as a business city, whereas to position themselves as the capital city is not tied to the RIS. Descriptions of other SCCs suggests that the development of RISs challenges SCCs around the globe. Abuja is a purpose-built capital that serves as Nigeria's capital since 1991 (Elaigwu 2009). Abuja's regional economy has not developed (yet) in line with the population growth what explains that the informal economy accounts for two third of all jobs (Abubakar 2014). Also the purpose-built Brasilia has not been a catalyst for economic development of the vast interior to the extent it was expected in the planning phase of the new capital (Madaleno 1996, 278). The GDP in Berlin, the purposely-selected capital of the reunified Germany, is lower than the German average (Institut der deutschen Wirtschaft Köln 2016). Such a brief literature review suggest that RIS development is a major issue for SCCs. In fact, the RISs in The Hague, Ottawa and especially Washington, D.C. rather represent positive outlier cases in the population of worldwide SCC-RISs.

As a consequence, this thesis predicts that SCCs are likely to build their image around the capital city status. This expectation seems to be supported by secondary literature about SCCs. The

economic development plan of Canberra argues, for example, that while lacking manufacturing and natural resources, Canberra should focus on presenting itself as an attractive place for residents as well as for visitors (Samson 2009, 28–31). Ankara that once had been a small Ottoman town was selected as the new capital of Turkey in 1923 and has been developed and showcased until today as the product and the symbol of Turkish republican modernization and secularism (Batuman 2013). However, image building strategies in high-profile SCCs such as Berlin, Jerusalem or Rome clearly differ from the observed patterns in Bern, Ottawa, and The Hague. The former three cities have the capacity to build their image around their symbolic, historic and cultural legacies.

#### Capital city specific constraints and compensation payments

The distinction between purpose-built capitals and purposely-selected capitals is important in explaining compensation claims of SCCs. Purpose-built SCCs typically deal with more local autonomy restrictions compared to purposely-selected SCCs. As a consequence, purpose-built SCCs have a justification to ask for compensation payments. Such a mechanism can also be found for example in Brasilia or Pretoria.

In the purpose-built Brasilia, federal property and property of other nations are tax exempted. Brasilia receives compensations for this fiscal constraints (G. Young 2008, 78). Additionally, the Brazilian capital receives national government subsidies through the “Constitutional Fund for the Federal District” to compensate for capital city burdens. The fund accounts for around 7% of Brasilia’s annual budget (Wolman et al. 2007, 16). Pretoria has been purposely-selected as the host city of the South African administration.<sup>54</sup> Pretoria does not know any local autonomy constraints (Steytler 2009, 227–28) and does not demand capital city specific compensations, because the presence of the government is seen as adding value to the city. Interestingly, the former colonial capitals, that have not been selected to host any government functions, sought compensation for the absence of government (Steytler 2009, 233).

#### Local governance regime

This thesis has revealed government-led local governance regimes with a tendency to prioritize development of land, real estate and infrastructure. Secondary literature of other SCCs describe similar activities in land and real estate development. Canberra focuses on creating an attractive city for residents and tourists and strives to accomplish this by modernizing its infrastructure

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<sup>54</sup> Pretoria hosts the public administration whereas Cape Town is the location of the national government. Constitutionally speaking, South Africa does not feature a capital city (Steytler 2009).

(Samson 2009, 28). Canberra's government justifies its policy prioritization of land and real estate development with its capital city status: "[G]iven the ACT's [Australian Capital Territory] lack of manufacturing and resources such as mining and agriculture revenues, planning efficiency and land development are more economically significant in the ACT than in any other Australian jurisdiction" (ACT Government 2008, 4). In Ankara, urban regeneration dominates the local agenda. About 14% of all land is designated as urban regeneration zones. The local administration takes the lead by focusing on undeveloped land on the fringes of the city, on persevering and renewing 'historic sites' as well as by evacuation and redeveloping of squatter areas (Batuman 2013, 588).

This thesis suggests that the growth orientation of locational policies agendas in some SCCs may be triggered by local tax autonomy constraints and the absence of an industrial tradition, hence strengthening the importance of developers. Local tax autonomy constraints are common in capital cities. Capitals have to deal with limited property tax bases because of federal and foreign real estate that is property tax exempted. Limited tax bases urge local governments to act fiercer in developing this tax bases. The absence of an industrial tradition creates a vacuum for developers to get influence on city hall. The needed material resources for governing a city are provided by developers in the absence of other business elites. However, the claim that capital cities are prone to prioritize physical development is not systematically tested against similar cities in the country that do not face these capital city specific tax constraints and that feature an industrial tradition. Thus, this claim has to be treated with caution. Yet, it is an interesting direction of further research.

### 9.3.2. Generalization to state-anchored secondary cities

The theoretical framework in this thesis has been fine-tuned to SCCs. However, some findings can be generalized beyond SCCs to cities in OECD countries, whose economies are characterized by a strong influence of governmental organizations, i.e. the so-called 'state-anchored' towns (Markusen 1999, 37). State-anchored secondary cities (SASCs) feature large government facilities such as military bases, universities, or government offices. Such cities feature similar challenges as SCCs, such as becoming less dependent on government budgets, linking public and private actors, positioning themselves in a globalized and increasingly knowledge-intensive interurban competition. The assumption behind this generalization is that SASCs do also formulate locational policies to increase their competitiveness in interurban competition.

In order to generalize to SASCs two adjustments seem appropriate. First, public procurement is not a similarly important economic process in SASCs as in SCCs (Warland 2016b, 150). Public

procurement can be a driver for knowledge dynamics in SCCs, whereas in SASCs, knowledge dynamics are primarily driven by public organizations. Thus, in SASCs we are likely to find supply-side driven knowledge dynamics whereas in SCCs we find supply and demand-driven knowledge dynamics (Mayer et al. 2016, 18). Second, SASCs are not tasked serving the nation states as well as its local residents. As a consequence, the nation state does not have many stakes in these cities, what makes local autonomy constraints less likely. By considering these adjustment, this thesis can also add some knowledge to explain locational policies agendas of SASCs. The findings of this thesis suggest that the local tax autonomy, the RIS development and the institutional fragmentation of the FUA need to be considered.

#### Development of land and real estate and tapping into public funds

This thesis suggests that SASCs focus on the development of land and infrastructure and try to tap into public funds, if their local tax autonomy is constrained. Cities focus on developing the property tax base if other tax bases are not available. This finding can be generalized to other cities, but it is important to note that also the local revenue composition should be considered. With regard to attract public funds, this thesis can add to research about SASCs in a more specific way. It is likely that SASCs try to leverage the presence of their government facilities by public actors to KIBS firms. The case studies suggest that these activities are not only triggered by the willingness to increase the innovation capacity. These cooperation models expand the opportunities to tap into public funds, because a lot of economic development funds in Western countries require such public-private partnerships.

SASCs in a high local tax autonomy setting are likely to focus on place based development such as creating a high quality of life as well as providing attractive personal income tax rates. Similar as for SCCs, the challenge for SASCs is to create an entrepreneurial ecosystem of KIBS firms around those anchor organizations. Low corporate tax rates seem not to trigger the creation, development or attraction of KIBS firms. The presence of highly educated workforce is a local assets as firms follow talent (Florida 2005). Talent seem to locate where the environment offers opportunity and diversity, but also low personal income tax rates attracts highly skilled workers (Feld and Kirchgässner 2003; Florida 2005; Wittwer 2016). KIBS firms depend on an environment where the highly educated people feel comfortable and where interactions between KIBS firms and other actors are simplified due to spatial proximity (Florida 2005; Devereux, Griffith, and Simpson 2007; Brühlhart, Bucovetsky, and Schmidheiny 2015; Wittwer 2016).

### Innovation policies

The challenges within RISs seem similar in SASCs like in SCCs: Organizational thinness of private sector firms, fragmentation between the public and private actors and lock-in. Especially fragmentation was the main target of innovation policies in SCCs. Also SASC-RISs are likely to feature highly regulated sectors in their knowledge application and exploitation subsystem. Dynamic knowledge flows between public and private actors in these highly regulated sectors are crucial for the development of the whole RIS. However, these two types of actors feature different characteristics with regard to culture, the willingness to take risk, the capacity to innovate and the possibility to be held accountable (Warland 2016c). This thesis proposes that local governments can play an important role as brokers, facilitators and mediators in bringing together public and private actors. Thus, the concept of ‘triple helix’ may be of similar importance in SASCs as in SCCs. Furthermore, the within-case analyses showed that innovation policies can target RIS failures making them very valuable locational policy instruments. Innovation policies allow local decision maker to formulate locational policies with a kind of agency because they allow for ‘structuring’ the RISs. As a consequence, SASCs are well advised to concentrate on formulating innovation policies.

### Regional coordination

Vertical institutional fragmentation in combination with high local tax autonomy is likely to be an obstacle for regional coordination in SASCs. However, three factors diverge regional coordination in SASCs from regional coordination in SCCs. First, SCCs are prone to be located near second-tier jurisdictional borders (provincial, state or cantonal borders) given the SCCs balancing function in the national urban system. SASCs do not have this propensity. Thus, it is more likely that FUAs in which SASCs are embedded are not vertically institutional fragmented. Therefore, SASCs are more likely to profit from institutional consolidation emulated by second-tier governmental entities. Second, government facilities in SASCs are not as important for the whole regional economy as they are in SCCs. Other local jurisdictions in the region may not profit much from spillover effects of governmental. This may lead to a related variety of economic bases what facilitates regional coordination. Third, SASCs do also have a disadvantage regarding regional coordination. The central government may not have the same interest in nudging regional coordination via ‘carrots’ or ‘sermons’ as it has in SCCs.

In sum, SASCs are less likely to be embedded in vertically institutional fragmented FUAs than SCCs and the economic bases of the jurisdictions in the region are more likely to show related variety. These two factors increase the likelihood of coordination success in SASCs compared to

SCCs. On the other hand, central government may not have the same high interest in fostering regional coordination in SASCs, a factor that that slightly reduces the chances for successful regional coordination.

## 10. Conclusion

This thesis focused on locational policies formulation in secondary capital cities (SCCs). Locational policies represent crucial instruments for localities to develop their place-specific assets and to position themselves in the globalized and increasingly knowledge-intense interurban competition. The need to be a competitive node in the international urban network is particularly salient for capital cities that are not the primary economic centers of their respective nations. This thesis was guided by four research questions. First, I wanted to investigate what kind of locational policies are being formulated in SCCs. Second, I was interested in what factors explain the formulation of these locational policies. Third, I examined what factors explain the configuration of whole locational policies agendas. Fourth, I studied the local governance regimes that engage in locational policies formulation in SCCs.

The analytical framework of this thesis is embedded in the neo-institutional literature and more specifically in the varieties of capitalism theory suggesting that the economic orientation and the political-institutional setting of a political economy are the two crucial explanatory factors for strategic decisions of localities (Hall and Soskice 2001). The economic orientation was approached with the Regional Innovation System (RIS) concept stemming from economic geography literature. The political-institutional setting of SCCs was captured by the Multilevel Governance (MLG) concept. The underlying causal mechanisms of the analytical framework incorporate both structure and agency. The formulated structural expectations propose that a variety of economic and political structural conditions constrain or enable the formulation of different types of locational policies. The formulated agency-based expectations propose that local decision makers can also draft locational policies that aim at the very structures that simultaneously enable or restrict them. Hence, the analytical framework of this thesis is interdisciplinarily informed and incorporates the simultaneity of structure and agency.

This thesis juxtaposed a within-case analysis of causality with a comparative case study research design by studying the four SCCs Bern, The Hague, Ottawa and Washington, D.C. (DC). The backbone of the data consists of semi-structured, in-person interviews. The interview data was triangulated with non-reactive data sources such as documents, reports or databases. The data collection was realized during three months of field studies in each of the four SCCs.

### Summary of key findings

I found that four explanatory factors can explain the formulation of locational policies in SCCs: The degree of local tax autonomy, the development stage of RISs, capital city specific constraints and vertical institutional fragmentation in combination with the degree of local tax autonomy.

These four explanatory factors represent an extract of the institutional context in which SCCs are embedded. Besides these institutional explanatory factors, agency as well as the local governance regime proved to be important in the formulation of locational policies.

*Local tax autonomy* is a game changer for whole locational policies agendas. The degree of local tax autonomy leads to two very different incentive structures that translate into two different locational policies agendas. On the one hand, low local tax autonomy pushes *property tax* as well as *attracting public funds* in the forefront of *development and public funds* locational policies agendas. As a consequence, infrastructure and real estate development is prioritized in order to boost the property tax base. The economic development public funds are so-called ‘carrots’, i.e. financial subsidies that are awarded with certain conditionalities. In that way, higher-tier economic development paradigms disseminate into local locational policies agendas. Additionally, these *development and public funds* agendas are not focusing on job growth but on avoiding expenditures for social assistance and welfare costs for their local residents, since they profit from increased corporate income tax revenues or an increased personal income tax revenues.

High local tax autonomy, on the other hand, leads to a *maximizing taxes* locational policies agenda. The focus of such agendas is to *maximize the revenue from their multiple tax instruments* at hand. The rationale of the agenda is to generate income because these cities are able to directly yield the benefits from their locational policies activities in form of tax revenues. The two SCCs enjoying high local tax autonomy – Bern and DC – are both not directly engaged in tax competition by trying to lower tax rates or offering tax breaks. They rather try to enlarge their property tax base by developing large-scale construction sites as well as to enlarge the personal income tax base by place-based neighborhood development and a focus on increasing the quality of life.

The *development stage of RISs* explains the characteristics of *image building strategies* in SCCs. Image building cannot be drafted from scratch as an image should be linked to concrete functions a city carries. Thus, well-developed RISs and especially thriving economic sectors are important to explain whether SCCs are able to formulate image building strategies as business cities. Positioning itself as the capital city is always possible for SCCs, which enables economically rather weak SCCs to shift the focus away from their economic inferiority to their political superiority. Furthermore, RIS development cannot explain *acquisition strategies* of SCCs. Acquisition strategies can be drafted on the basis of multiple local assets. For example, the capital city status is in itself an acquisition argument applied to KIBS firms that seek proximity to governmental organizations.

*Capital city specific constraints* explain whether SCCs ask for *compensation payments* based on their capital city status. The status of the city prior to its selection as the capital accounts for the intensity of

capital city specific constraints. Ottawa and DC were purpose-built capital cities whereas Bern and The Hague were purposely-selected capitals that carried a certain function prior to their selection as capitals. Purpose-built capital cities face more constraints than purposely-selected cities. Compensation payments are locational policy instruments in purpose-built capitals because they offset some of these capital city specific local autonomy constraints.

*Vertical institutional fragmentation in combination with local tax autonomy* explains the success of coordinating locational policies in the functional urban area. Second-tier borders, i.e. state, provincial or cantonal borders, are powerful institutional constraints for regional coordination. Vertical institutional fragmentation only unleashes its full negative effect in combination with high local tax autonomy. Thus, vertical institutional fragmentation is an upstream explanatory factor. The combination of both institutional factors creates an unlevel playing field for local tax competition, i.e. differing tax regimes and consequentially different tax rates of jurisdictions, that leads to regional tax competition. The national level may nudge regional coordination by either directing funds to regional coordination organizations or by facilitating coordination talks between the jurisdictions in the region.

The case studies have revealed *how and why agency* matters in the formulation of locational policies agendas. Innovation policies may alter the economic structural constraints that restrict and enable the formulation of locational policies. Thus, innovation policies by their ability to develop RISs can kick-start positive chain-reactions in the formulation of locational policies. I found no evidence that coordination may structure the MLG setting in a similar way.

Furthermore, politics is a factor in its own right. *Local governance regimes* in SCCs seem to be distinctive from other types of cities. This thesis has revealed that not much business actors in SCCs are able to provide crucial resources – such as money, land, and technical expertise – needed to govern a city. SCCs are government towns that lack an industrial tradition. In such a context, a resource-rich and thus powerful business elite could not emerge with the exception of developers. Developers and a growth-oriented locational policies agenda seem to mutually reinforce each other. However, only in North American capitals have developers leverage on locational politics and locational policies. In sum, I found *government led local governance regimes* in all SCCs, but only North American SCCs feature a government led growth-oriented regime in which developers occupy a central role.

The *external validity* of these findings is especially given *for other SCCs*. The development of RISs seems to be challenging for a lot of SCCs, which makes them prone to formulate image building strategies based on their capital city status. Furthermore, the distinction between purpose-built

capitals and purposely-selected capitals is important to explain capital city specific constraints. The former capitals are more likely to claim compensation payments. The external validity of the government-led local governance regimes with a tendency to prioritize development of land, real estate and infrastructure remains unclear. Whereas I found hints that the development of infrastructure is important in other SCCs, I could not systematically assess whether this development-orientation of the local governance regime is capital city specific.

I only *generalize* the findings to *state-anchored secondary cities* (SASCs) whose economies are characterized by strong influence of governmental organizations. The degree of local tax autonomy is likely to have similar effects on locational policies agendas in SASCs as in SCCs. Low local tax autonomy leads to a prioritization of land, real estate and infrastructure development. Furthermore, it is likely that SASCs trying to tap into public funds in a similar way as SCCs, namely by leveraging their government facilities. SASCs in high local tax autonomy settings are likely to focus on place based developments as well as attractive tax rates in order to provide an attractive environment for KIBS firms and their highly qualified employees. I assume that innovation policies operate similarly in SASCs as in SCCs since both feature similar RISs. Local governments in SASCs can play an important role as brokers, facilitators and mediators in bringing together public and private actors. The preconditions for regional coordination make coordination more likely to succeed in SASCs than in SCCs.

The findings in this thesis could be strengthened by an extended time frame. This thesis relied on a cross-sectional design with a within case analysis of causal mechanisms. However, the within case analysis could be extended over time, which would be especially helpful in studying the development and change of whole locational policies agendas as well as of local governance regimes. This would allow tracing how local governance regimes influence locational policies agendas and vice versa. Indeed, urban politics is treated rather marginally and could be improved by a more local governance regime-centered approach that would examine more thoroughly how globalized economic pressures are mediated by local decision makers (DiGaetano and Klemanski 1999). This thesis focused exclusively on configurations of locational policies and did not evaluate their outcomes. It would be fruitful for further research to go beyond describing and comparing locational policies by evaluating the effects of concrete locational policy choices. A more systematic comparison of SCCs with SASCs would allow to better control for factors coming along with economic secondarity and thus illuminate more clearly the specific role of the capital city status.

### Theoretical implications

This thesis contributes to the urban studies literature in six ways. First, the locational policies framework developed in this thesis is fruitful for analyzing the variety of policies that localities formulate to strengthen their economic competitiveness. Second, the distinction between purpose-build capitals and purposely-selected capitals is relevant when studying capital city specific local autonomy constraints. Third, the development of the RISs and more specifically RIS failures are important to explain innovation policies. Fourth, 'structuring' is an eligible concept to incorporate agency in urban studies. Fifth, this thesis found government led local governance regimes in SCCs. This urban governance regime type may be applicable to other types of cities in which private actors are largely missing.

The *locational policies framework* contains an added value for studying strategies of cities to face interurban competition out of two main reasons. First, it enables *charting whole locational policies agendas* by drawing several connections between locational policies. In addition, it allows linking allegedly different locational policies. For example, innovation policies are not just concerned with increasing the innovation capacity of a region but they are also tools to attract public funding. Only by considering a broad range of locational policy instruments are such empirical connections between locational policies traceable. Second, *locational policies are an ideal area of research to study the effects of globalization* on policies in a variety of cities because locational policies are simultaneously targeting and responding to an intensified, interurban competition. The actual locational policies configurations of the four cities are dependent on place-based constraints and resources.

Building on the first theoretical contribution, this thesis supports a *neo-institutionalist* take in the analysis of urban strategies to compete in global interurban competition. Whereas the rationale to be competitive in a globalized, knowledge-intensive interurban competition is shared by all four cities, the actual policy solutions are different given different constraints and resources. This thesis shows locational policies are the products of their local context, but they aim at further embedding their own jurisdiction into a globalized market. In these ways are locational policies – what Cerny et al. (2005) describe as – internalizing globalization. However, I could not find convergence of locational policies in the four cases under scrutiny. In line with Variety of Capitalism Theory (VOC) (Hall and Soskice 2001), the diversity of locational policies in this thesis can be explained by the enabling and constraining settings in which SCCs operate. This thesis corroborates neo-institutional arguments highlighting the similarity of motivations to engage in economic development whereas the concrete policy choices are shaped by place-based resources and constraints (Savitch and Kantor 2002; Malecki 2007).

This thesis suggests that the status of the city prior to its selection as capital should be considered to explain capital city specific constraints. The four cases in this study can be divided *in purpose-built capital cities and purposely-selected capitals*. The latter carried a certain function in the urban system prior to its selection as capital. Purpose-built capital cities seem to face more local autonomy constraints than purposely-selected cities. The latter would not have accepted cutbacks in the local autonomy brought along by the capital city status. The case studies have revealed that compensation payments are means to offset these local autonomy restrictions. Accordingly, it is important when studying capital specific compensations to differentiate between purpose-built capitals and purposely-selected capitals. This distinction has explanatory power when studying the local autonomy of SCCs and thus enriches the existing political-institutional capital city categorizations proposed by Rowat (1973; see also Harris 1995; Slack and Chattopadhyay 2009). This distinction contributes to better understanding of the classical capital city conflict, i.e. the diverging priorities of capital cities to serve the whole nation as well as its local residents (Rowat 1968; Rowat 1973; Harris 1995). Given the population of SCCs in OECD countries, I could apply the distinction in the following manner while adding another category:

- Purpose-built city: Ankara, Canberra, Ottawa, Washington, D.C.
- Purosely-selected secondary city: Bern, The Hague, Wellington
- Former primary capital cities: Berlin, Jerusalem, Rome

This distinction may become especially relevant outside the OECD because former colonized nations often break with their colonial ties by building new capital cities from scratch (Moser 2010, 285). Further research should show whether this distinction has potential to be generalized to SCCs outside the OECD.

RIS failures explain the configurations of innovation policies. *Innovation policies are instruments to specifically develop RISs by targeting RIS failures*. This finding supports the RIS literature's rather functionalistic take on policy interventions that expect policy interventions only in case of system failures (Asheim, Smith, and Oughton 2011; Cooke 2001; Martin and Trippel 2014). This thesis adds to this literature by embedding innovation policies in a wider set of locational policies that goes beyond the functionalist understanding of policy interventions. Thus, innovation policies should be understood in the context of multifaceted locational policy strategies.

The *concept of 'structuring'* (Abrams 1982; Giddens 1984; Imbroscio 1999, 46–47) fits into a neo-institutional analytical framework that aims to *incorporate agency-based causal mechanisms*. To my knowledge no empirical application of 'structuring' in urban studies exists, despite David Imbroscio's (1999) discussion of 'black urban regimes'. This thesis is a comprehensive application

of the ‘structuring’ concept in urban studies and may thus provide guidance for further applications of ‘structuring’. Such studies are needed because “understanding urban politics means acknowledging the simultaneity of structure and agency” (Ward et al. 2011, 855).

This thesis brought to light a specific local governance type in SCCs: *government led local governance regimes*. As a particular form, the two North American SCCs feature a government led growth-oriented local governance regime in which developers occupy a central role. The urban politics literature presents three similar regime descriptions. First, the government led pro-growth regime grasps local governments, often in partnership with elements in the private sector, as crucial agents in encouraging, promoting, and subsidizing private investment through grants, loans, land sites, and other inducements (DiGaetano and Klemanski 1999, 59). Second, Imbroscio (1998) describes a local-statist regime in which local governments’ activities in public property ownership and public profitmaking are more intense than the division of labor between state and market would suggest. Third, the growth machine (Molotch 1976; Logan and Molotch 1987) emphasizes the power of land and property owners that are constantly striving to increase the value of their property. Land and property owners ally with other local actors united under the interests of economic growth to pursue the development-oriented locational policies agenda.

The local governance regimes in SCCs seem to entail elements of all three local regime descriptions. However, local governments in SCCs do not occupy a strong role because they control important local resources, but rather because no business actors possessed these resources. This can be explained by the lack of industrial tradition. The weak role of business actors are a characteristic of local governance regimes in SCCs. Developers seem to be important because they can fill the vacuum of private actors, and not because they are especially powerful and would thus trump other local business elites. Consequently, *government led local governance regime are applicable to cities where private actors are largely missing*. This regime description can thus fill a gap in the urban governance literature.

### Empirical implications

The empirical implications of this thesis are fourfold. First, federal government interventions in local politics and local policy-making can be distinguished in ‘carrots’, ‘sticks’ and ‘sermons’. Second, local governments play an important role as intermediaries in a political economy that is fragmented between public and private actors. Third, developers are the most important business actors in the two North-American SCCs. Fourth, SCCs learn from each other because local policy makers grasp the similarity of their challenges.

*Federal governments steer their capital cities with a variety of policy instruments*. The ‘carrots’, ‘sticks’, and ‘sermons’ lens (Bemelmans–Videc, Ray, and Vedung 1998) clears the picture of federal

interventions in local politics and local policy-making of capital cities. ‘Carrots’ are mostly being offered via economic development funds. For SCCs enjoying high local tax autonomy, i.e. for Bern and DC, the leeway to refuse these resources is larger than for SCCs in a setting with low local tax autonomy, i.e. for Ottawa but especially for The Hague. Thus, an ulterior motive of Ottawa’s and The Hague’s locational policies is to tap into national public funds. I found instances that a higher dependency on these ‘carrots’ brings local governments in a dilemma between bottom-up initiatives that would benefit the locality and accepting resources that come with strings attached. This finding is not capital city specific and should hence be found for example as well in SASCs. ‘Sticks’ are direct interventions in the local autonomy of capital cities. ‘Sticks’ are often used in DC and to a lesser extend in Ottawa. In Ottawa, the federal land-use agency has authority over a considerable amount of land in the city. In DC, the federal oversight blocks local policies to the extent that the district became a nation-wide battle ground for contested societal policies. In no other SCC are capital city specific local autonomy constraints as intense as in DC (Boyd and Fauntroy 2002; Wolman et al. 2007). ‘Sermons’ have been found in these thesis particularly in regional coordination. National government organizations may facilitate coordination by bringing the jurisdictions in the region at one table.

*Local economic development agencies play an important role as intermediaries*, local brokers or facilitators (Tödting and Trippel 2005; Bradford and Wolfe 2013, 13). This observation is especially relevant for capital city economies because these specific economies are dependent on fruitful interactions between public and private actors. Intermediaries are necessary for SCCs because they have the potential to bridge the many differences between public and private actors.

*Developers are the most important business actors* in North American SCCs. Their role seems to be so strong because SCCs lack an industrial tradition. Compared to European cities, business elites are closely entangled with local public elites in North American cities (e.g. DiGaetano and Klemanski 1999; Harding 1994; Harding 1995; Pierre 2005; Pierre 2014). In the North American settler tradition, cities were at the fore front of territorial expansion and the engines of ‘the politics of growth’ (Judd and Swanstrom 2015, 3–4). Thus, developers are crucial players in the North American urban history. The importance of property taxation in the US and Canada (Brüllhart, Bucovetsky, and Schmidheiny 2015, 1138–39) additionally pushes developers into a powerful position in North American local politics. These three reasons not just explain the importance of developers but may also account for the strong growth-orientation of locational policies agendas in North America. Developers and growth-orientated locational policies agendas seem to mutually reinforce each other.

There are *empirical connections between SCCs*. Local decision makers visit each other, derive lessons learned and share best practices (see for example Mayer et al. 2013). For example, the Capital Alliance is a cooperation between capital city planners of Ottawa, DC, Brasilia and Canberra. Of special interests in the context of this thesis are learning mechanisms between Ottawa and The Hague in cyber security issues. Since the The Hague Security Delta performs well, it gets attention from other cities that also feature cyber security firms or want to expand this sector. Ottawa has turned to The Hague, instead of borrowing from the closer DC, because Ottawa is interested in learning how smaller cities can position themselves prominently in such a promising sector.

### Practical implications

The practical implications cannot be split up in different bullet points. Understanding the interplay between different locational policies and exploiting the potential of the ‘triple helix’ are the building blocks for a two-dimensional position strategy of SCCs.

SCCs have the potential to *position themselves two-dimensionally*: As the capital city and as a business city. These two dimensions are not mutually exclusive. On contrary, they should be pursued simultaneously and can strategically be merged as shown by the examples of Ottawa, The Hague and DC. The capital city status is not substitutable by other cities what enables economically rather weak SCCs to shift the focus away from their economic inferiority to their political superiority. Thriving highly regulated sectors such as cyber security or medical technology are the basis to position SCCs as business cities. Whereas a positioning strategy as a capital city is always possible, only well-developed sectors enable a positioning strategy as a business city.

The ‘*triple helix*’ concept proved to be meaningful to develop highly regulated sectors in SCCs. The knowledge interactions between industries, knowledge institutions and governmental organizations are crucial for dynamic capital city economies. The last actor type is largely missing in other regional economies making SCCs arenas in which the ‘triple helix’ may unfold its full potential. SCCs are knowledge hubs and thus dependent on knowledge spillovers between all crucial actors. In sum, the exploitation of the ‘triple helix’ is relevant for SCCs because of the strong presence of governmental organizations and the knowledge intensity of their economies. *Innovation policies are the key locational policies to stimulate interactions in the ‘triple-helix’* and thus an important element to develop these highly regulated sectors.

The beauty of *innovation policies* is that these policies are not structurally constrained. Innovation policies can be formulated to strategically develop the shortcomings of the economic sectors. In sum, innovation policies are expedient locational policies because they may *kick start positive chain*

*reaction* that enables the formulation of a wide range of locational policies and because innovation policies can be formulated rather *independently form structural constraints*.

### Concluding remarks

This thesis has demonstrated that SCCs can simultaneously position themselves as capital cities and as business cities. Thriving highly regulated sectors are the preconditions for such a two-dimensional positioning strategy. Innovation policies are the key locational policies to develop these highly regulated sectors. Thus, SCCs possess local assets suitable to sustain in the increasingly knowledge-intensive interurban competition. In that sense are SCCs not “leaves in the wind” of globalization (Savitch and Kantor 2002, 346) nor objects of nation states (Mayer et al. 2016).

SCCs unify economic secondarity and political primacy what translate into a specific political economy. In today’s economic globalization, this specific political economy can be leveraged by positioning itself with a distinctive profile in interurban competition. The two-fold positioning strategy mirrors the political primacy and the economic secondarity of SCCs and thus perfectly reflects the main economic challenges of SSCs. Hence, this thesis supports the neo-institutionalist take on globalization by showing that policy responses to globalization pressures, i.e. locational policies, reflect place-based resources and constraints. SCCs cannot escape their destinies as government towns but they can formulate a variety of locational policies in order to supplement their capital city function with an economic promising profile.

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## 12. Annex

Table 56: List of interview partners

Interview Nr.	City	Name	Role	Relevant affiliation(s)
1	Bern	Bratschi, Peter	Private actor/Interest group representative	Partner and lawyer at Bratschi Wiederkehr & Buob Founder Circle of Bern ( <i>Berner Runde</i> )
2	Bern	Bucher, Jürg	Private actor/Interest group representative	Chairman of the Board of Directors of Valiant (Swiss bank) Ex-CEO at Swiss Post
3	Bern	Buchmüller, Regula	Public official	Senior public servant at City of Bern
4	Bern	Fluri, Kurt	Public official	Member of the Swiss Parliament Mayor City of Solothurn President Association of Swiss Cities ( <i>Schweizer Städteverband</i> ) Board member Capital Region Switzerland
5	Bern	Gasche, Urs	Private actor/Interest group representative	Chairman of Board of Directors at BKW group Member of the Swiss Parliament Member of Circle of Bern ( <i>Berner Runde</i> )
6	Bern	Gehrig, Orlando	Economic development agent	Vice-President Strategic Location Development, Bern Economic Development Agency (Canton of Bern)
7	Bern	Jocham, Uwe	Private actor/Interest group representative	Senior Vice President and General Manager CSL Behring AG President Employer Association Canton of Bern Member of the board at Chamber of Commerce Canton of Bern Member of Circle of Bern ( <i>Berner Runde</i> ) Member Fokus Bern
8	Bern	Messerli, Paul	Expert	Professor emeritus at University of Bern Economic geographer
9	Bern	Müller, Hans-Ulrich	Private actor/Interest group representative	President Swiss Venture Club Head Swiss Partnerships Credit Suisse
10	Bern	Nietlisbach, André	Public official	Senior public servant at economic department, Canton of Bern
11	Bern	Pfyl, Thomas	Public official	Financial manager municipality of Köniz, Responsible for economic development
12	Bern	Poschet, Lena	Public official	Federal Office for Spatial Development (ARE)
	Bern	Gilgen Thetaz, Regina	Public official	Federal Office for Spatial Development (ARE)
13	Bern	Rytz, Regula	Private actor/Interest group representative	Member of the Swiss Parliament Co-President Green Party Switzerland Ex-member of City Council Bern Co-President <i>Bern Neu Gründen</i>
14	Bern	Stampfli, Katharina	Economic development agent	Member of the Executive Board Economic Area Bern ( <i>Bern Wirtschaftsraum</i> )
15	Bern	Stämpfli, Peter	Private actor/Interest group representative	Chairman of Board of Directors at Stämpfli AG Founder Fokus Bern Member of Circle of Bern ( <i>Berner Runde</i> )
16	Bern	Steiner, Jürg	Expert	Journalist at <i>Berner Zeitung</i> Book author
17	Bern	Tobler, Georg	Economic development agent	Managing Director Capital Region Switzerland
18	Bern	Tschäppat, Alexander	Public official	Mayor City of Bern Member of the Swiss Parliament Board member Capital Region Switzerland
19	Bern	Walter, Felix	Expert	Head of economic department, Ecoplan
20	The Hague	Adarghal, Karim	Public official	Account Manager IT/Telecom industry City of The Hague
21	The Hague	Blokmaker, Daniel	Private actor/Interest group representative	Entrepreneur Ex-Business Development & Innovation Manager at KPN Telecom,
22	The Hague	de Vries, Jouke	Expert	Professor Public Administration University Leiden Dean Campus The Hague, University Leiden
23	The Hague	den Bruinen, Joris	Economic development agent	Deputy Director The Hague Security Delta
24	The Hague	Dencher, Robert	Private actor/Interest group representative	Head Government Relations Netherlands at Shell International
25	The Hague	Genet, Louis	Public official	Director Investments International City The Hague, City of The Hague,
	The Hague	van der Klaauw, Marcel	Public official	Senior Policy Advisor City of The Hague

26	The Hague	Groen, Rosa	Expert	Lecturer and PhD candidate at The Hague University of Applied Sciences/Leiden University
27	The Hague	Hillen, Vincent <i>written interview</i>	Public official	Senior financial policy officer City of The Hague
28	The Hague	Houtzagers, Bert-Jan	Private actor/Interest group representative	Dutch State Advocate Partner and lawyer at Pels Rijcken & Droogleever Fortuijn
	The Hague	Scheltema, Martijn	Private actor/Interest group representative	Partner and lawyer at Pels Rijcken & Droogleever Fortuijn Professor Erasmus University Rotterdam
29	The Hague	Janssen, Sander	Public official	Head of the Host Nation Division at the Dutch Ministry of Foreign Affairs
30	The Hague	Kok, Laurens	Economic development agent	Foreign Investor Relations Manager at West-Holland Foreign Investment Agency
31	The Hague	Krohl, Niels	Economic development agent	Senior Investor Relations manager at InnovationQuarter
32	The Hague	Meijers, Evert	Expert	Delft University of Technology, economic geographer
33	The Hague	Oliver, Iris	Public official	Senior Strategic Account Manager City of The Hague
34	The Hague	Schiebroek, Marleen	Expert	Consultant, Brain & Company
35	The Hague	Schuttenbeld, Ben	Private actor/Interest group representative	Senior Advisor Chamber of Commerce Southwest Holland
36	The Hague	Shimshon, Gideon	Expert	Director Centre for Innovation Leiden University
37	The Hague	van der Linden, Harry	Public official	Advisor The Dutch Ministry of Economic Affairs, Regional Affairs and Spatial Policy
38	The Hague	van Geelen, Nicolas	Public official	Strategic Advisor Administration & Policy Province South Holland
39	The Hague	van Haelst, Nicole	Private actor/Interest group representative	Director International Community Platform
40	The Hague	van Loon, Branko	Public official	Policy Advisor International Affairs City of The Hague
41	The Hague	van Ommeren, Kees	Expert	Partner and Founder Decisio
	The Hague	Wijnen, Mathieu	Expert	Junior Advisor Decisio
42	The Hague	van Vondel, Esther	Public official	Senior Policy Officer International Economic Affairs City of The Hague
	The Hague	de Vries, Matthijs	Public official	Senior Advisor Spatial Economic Strategy & Policy City of The Hague
43	The Hague	Vokurka, Lucas	Economic development agent	Director Economic Development Metropolitan Region Rotterdam The Hague
	The Hague	Nijhof, Bart	Economic development agent	Process Manager Economic Development Metropolitan Region Rotterdam The Hague Ex-regional Economic Cooperation Policy Advisor City of Rotterdam
44	Ottawa	Bashir, Saad	Public official	Director Economic Development & Innovation at City of Ottawa
45	Ottawa	Bird, Graham	Private actor/Interest group representative	President of GBA, developer
46	Ottawa	Champagne, Eric	Expert	Associate Professor in Public Administration at the School of Political Studies at the University of Ottawa and Assistant Director at the Centre on Governance
47	Ottawa	Chattopadhyay, Rupak	Expert	President and CEO at Forum of Federations
48	Ottawa	Light, John	Expert	Ex-Director of Regional Affairs for Minister of Foreign Affairs John Baird
49	Ottawa	Dale, Jeffery	Economic development agent	Ex-President Ottawa Centre for Research and Innovation
50	Ottawa	Faris, Ian	Private actor/Interest group representative	President & CEO at Ottawa Chamber of Commerce
51	Ottawa	Fielding, John	Economic development agent	Regional Director Business Development Eastern & Northern Ontario at Ontario Centres of Excellence
52	Ottawa	Kristmanson, Mark	Public official	Chief Executive Officer at National Capital Commission
53	Ottawa	La Flamme, Guy	Public official	Executive Director at Ottawa 2017 Bureau
54	Ottawa	La Pointe, Francois	Public official	Ex-Senior Executive Capital Planning at National Capital Commission Senior Fellow Centre on Governance University of Ottawa
55	Ottawa	Lazenby, Bruce	Economic development agent	President and CEO at Invest Ottawa
56	Ottawa	McNabb, David	Public official	Acting Director General, Strategic Policy at FedDev Ontario
57	Ottawa	Normand, Antoine	Private actor/Interest group representative	President Gatineau Chamber of Commerce

58	Ottawa	Paquet, Gilles	Expert	Professor Emeritus Telfer School of Management University of Ottawa
59	Ottawa	Ritonja, David	Private actor/Interest group representative	Vice President at Alcatel-Lucent Co-Chair of Invest Ottawa
60	Ottawa	Saric, Sandra	Economic development agent	Vice President Talent Innovation at Information and Communications Technology Council
61	Ottawa	Sudds, Jenna	Private actor/Interest group representative	Executive Director at Kanata North Business Association
62	Ottawa	Temsamani, Jalia	Economic development agent	Business development advisor Développement économique – CLD Gatineau
	Ottawa	Cameron-Nunes, Émilie	Economic development agent	Responsable de la diversité culturelle at Ville de Gatineau
63	Ottawa	Terry, Bernadette	Economic development agent	Senior Business Development Lead for the Aerospace, Defence & Security Sector at Invest Ottawa
64	Ottawa	Varriano, Franco	Private actor/Interest group representative	Director of Startup Grind Ottawa Entrepreneur
65	Washington D.C.	Barros, Francis	Public official	Program Manage Small Business Services Department of Homeland Security
66	Washington D.C.	Bean, Chuck	Economic development agent	Executive Director at Metropolitan Washington Council of Governments
67	Washington D.C.	Boyer, Laurie	Economic development agent	Executive Director of Rockville Economic Development Co-President Council of Economic Development Officials
68	Washington D.C.	Buchanan, Robert E.	Private actor/Interest group representative	Partner Buchanan Partners Member 2030 Business group
69	Washington D.C.	Clinton, Kevin	Private actor/Interest group representative	Chief Operating Officer Federal City Council
70	Washington D.C.	D'Amore, Kristin	Private actor/Interest group representative	Director of Strategic Initiatives and President of The Entrepreneur Center at Northern Virginia Technology Council
71	Washington D.C.	Fuller, Stephen	Expert	Professor at George Mason University, Public Policy and Regional Development, Center for Regional Analysis
72	Washington D.C.	Hawkins, Val	Economic development agent	Ex-President & CEO Alexandria Economic Development Partnership, Inc.
	Washington D.C.	Landrum, Stephanie	Economic development agent	Current President & CEO Alexandria Economic Development Partnership, Inc
73	Washington D.C.	Khan, Sakina	Public official	Senior Economic Planner with the District of Columbia Office of Planning
74	Washington D.C.	Koster, Julia	Public official	Director, Office of Public Engagement at the National Capital Planning Commission
	Washington D.C.	Staudigl, Stephen	Public official	Public Affairs Specialist at National Capital Planning Commission
75	Washington D.C.	Lazere, Ed	Private actor/Interest group representative	Executive Director at D.C. Fiscal Policy Institute
76	Washington D.C.	Levine, Mark	Private actor/Interest group representative	Managing Director at Core Capital Partners, venture capitalist
77	Washington D.C.	Loescher, Doug	Public official	Ex- Director of Business Development and Strategy at Washington D.C. Mayor's Office
78	Washington D.C.	Richmond, Cynthia	Economic development agent	Acting Director Arlington Economic Development
	Washington D.C.	Winn, Christina	Economic development agent	Director Business Investment Group Arlington Economic Development
79	Washington D.C.	Rivlin, Alice	Expert	Director of the Health Policy Center and Senior Fellow in the Economic Studies Program Visiting Professor at the McCourt School of Public Policy at Georgetown University Chair of the District of Columbia Financial Management Assistance Authority (1998-2001)
80	Washington D.C.	Ruble, Blair <i>written interview</i>	Expert	Director Kennan Institute at Woodrow Wilson International Center
81	Washington D.C.	Smith, Walter	Expert	Executive Director DC Apleseed Center for Law & Justice
82	Washington D.C.	Stone, Clarence	Expert	Research Professor of Political Science and Public Policy at George Washington University Professor Emeritus at the University of Maryland
83	Washington D.C.	Stone, Nick	Expert	Director National Capital Region Operations at Virginia Tech
84	Washington D.C.	Tregoning, Harriet	Public official	Principal Deputy Assistant Secretary for the Office of Community Planning and Development Ex-Director of the District of Columbia Office of Planning

85	Washington D.C.	Turner, Jeff	Private actor/Interest group representative	Managing Partner, Squire Patton Boggs
86	Washington D.C.	Watkins, Matthew	Private actor/Interest group representative	Economic Development Manager Downtown D.C. Business Improvement District
87	Washington D.C.	White, Kyle	Private actor/Interest group representative	Director, Economic Initiatives Greater Washington Board of Trade Board of Trade
88	Washington D.C.	Wolman, Hal	Expert	Professor of Political Science, Public Policy and Public Administration, and International Affairs at George Washington University
	Washington D.C.	Young, Gary	Expert	Professor and Associate Director at the George Washington University
89	Washington D.C.	Zahradnik, Robert	Public official	Ex-Director of Research District of Columbia Government, Office of Revenue Analysis Director State Policy, The Pew Charitable Trusts
90	Washington D.C.	Zipper, David	Public official	Ex- Director of Business Development and Strategy at Washington D.C. Mayor's Office Managing Director at 1776, global start-up hub
91	Washington D.C.	Anonymous interview	Public official	Federal level