

the results and actions that are taken under the sustainable spatial development process. Therefore, in European studies and platforms related to developing and implementing territorial cohesion and sustainable spatial planning, countries like Albania outside the Union, and even more the Balkans, should not be excluded, on the contrary involved, as the benefits of cohesion overcome formal boundaries.

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ID 1611 | METROPOLITAN GOVERNANCE APPROACHES IN DEVELOPING SUSTAINABLE EUROPEAN CITIES

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1 INTRODUCTION

Metropolitan areas involve several jurisdictions at different levels of authority and different interests. National policies in political and economy systems might influence the distribution of power and resources among territorial authorities in steering the metropolitan area development (Nicholls, 2005; Boudreau et al, 2006). Furthermore, other actors besides the government typically have conflicting interests among them. Consequently, some policies are formulated and implemented without coordination among related actors and without sufficient consideration on sustainability (Nicholls, 2005; Boudreau et al, 2006; Firman, 2008; Islam, 2014).

In dealing with complexity of metropolitan area characteristics, individual actors within metropolitan areas obviously cannot work independently. Coordination among them is required, especially in addressing negative impacts of economic and social activities on environment and the provision of public goods and

services. Institutional improvement of metropolitan areas through examining governance models is inexorable (Firman, 2008). Institutional changes are needed to make urban governance more effective in achieving sustainable city (United Nations Human Settlements Programme, 2009). In addition, transformation through social and political action is required in managing city to be sustainable (Hopwood, et.al, 2005).

Many studies claim that governance has important role in implementing sustainable development in metropolitan area (Davidson, 1996; Haughton, 1997; Firman, 2008; Gleeson and Spiller, 2012). In the metropolitan context, governance is understood as relations between private, civil society, and public sector that require collective action to achieve common goals (Boudreau et al, 2006; Hudalah et al, 2014). As metropolitan development has become global concern, many studies have been conducted to introduce some models of metropolitan governance required to cope with the urgency of sustainable development.

Metropolitan governance issue has often been discussed in planning for sustainable cities in European countries (e.g Bulkeley and Betsill, 2005; Stigt et al, 2016).

Since different actors in metropolitan area have different kinds of interest and degrees of power, sustainability as a development goal is difficult to implement (Nicholls, 2005; Firman, 2008; Hudalah et al, 2014). Accordingly, it is necessary to understand how metropolitan governance would work to promote the sustainable cities within the metropolitan area. Nevertheless, the framework of metropolitan governance for sustainable city development is rarely discussed in urban studies. Hence, this study will offer that framework to analyze which aspects of metropolitan governance largely affect the implementation of sustainable cities.

This article will first address the challenges of metropolitan area development and the application of metropolitan governance approaches. Subsequently, the concept of sustainable cities will be explained. Lastly, metropolitan governance framework for sustainable development will be discussed.

2 METROPOLITAN DEVELOPMENT AND GLOBALIZATION

Urbanization that occurs almost in every part of the world brings positive and negative consequences either on social or physical aspects. It is irrefutable that urbanization promotes the economies of scale, creativity, innovation, and increasing productivity (Dente, 1990; Ambruosi et al, 2010; Gleeson and Spiller, 2012). Nevertheless, uncontrolled urbanization has caused many environmental problems, such as air pollution, the loss of biodiversity, flood risk, drinking water scarcity (Kenworthy, 2006; Ambruosi et al, 2010).

The rapid population growth in the cities has brought pressure in the urbanization processs generating the emergence of metropolitan areas. The core city of metropolitan interacted with its neighboring cities, created linkages with them, and shared the burden of public service provision (Newton, 2012). With regards to the expensive land and deteriorating environmental quality in the main city, sub urban areas has become the options for the new residential development (Sellers and Hoffman-Martino, 2008; Newton, 2012). The agricultural land in the periphery continues to decrease as the result of escalating demand for affordable housing. Gradually, sub urban areas have been developed as cities that also bolster the function of the main city within metropolitan area as the center of jobs and services (Dente, 1990). Externalities (such as pollution, waste) generated from activities in the core city that have impact on its surrounding cities within metropolitan area are inevitable. Moreover, the division of public good provision has become contentious among jurisdictions in the metropolitan area. For example, most cities are hesitant to provide landfill in their own jurisdictions.

Metropolitan region is characterized by socio-economic, environmental, and political administrative interdependences among local government jurisdictions in the region (Firman, 2008). The main city where business centers or multinational headquarters are mainly located usually provides more job opportunities, variety of amenities, and entertainment facilities compared to the surrounding cities (Newton, 2012). Hence, the main city remains attractive place for people to work or to operate business. Apparently, commuting or mobility from the periphery to the center has become part of metropolitan characteristics.

Globalization has also brought consequences on metropolitan area development regarding the transnational capital flows and public infrastructure provision that persuades competitiveness and imperil the environmental sustainability. As Kearns and Paddison (2000) pointed out, globalization may result in spatial disparity, social segregation, and the loss of power of urban governments to control globalized economic activities. They noted urban governance as political and administrative processes in utilizing resources to get things done. In addition, they argued that quality of urban governance which refers to the quality of public policy making and delivery of public goods and services (Stead, 2015) needs to be improved through the capacity building in dealing with urban complexity and rapidly changing circumstances related to globalization.

Understanding metropolitan characteristics and the problem of metropolitan is essential in achieving effective metropolitan governance which is indicated by development of trust among actors (institutional cohesion) and the achievement of sustainability goals. Dente (1990) argued that metropolitan problem needs to be defined properly in order to provide appropriate solution. He made differentiation about metropolitan types resulting in various definition of metropolitan problems which require synoptic and adaptive approaches to design metropolitan governance models. To determine the suitable institutional design for metropolitan governance is challenging, especially when it comes to accountability, coordination, integration, and sustainability.

3 METROPOLITAN GOVERNANCE APPROACHES

The rapid expansion of urban areas beyond established municipal boundaries and the rising complexity in managing externalities and public service provision has driven the growing concern for metropolitan governance requiring strategic vision, facilitative networks, local leadership, political and community support (Williams, 1999). Metropolitan governance can be defined as the pursuit of collective goals through inclusive and coordinated strategies and institutional arrangements at the metropolitan scale (Pierre, 2005; Hudalah et al, 2014). Gleeson and Spiller (2012) argued that effective metropolitan governance is crucial to human well-being, environmental sustainability, and economic growth. Effective metropolitan governance refers to effective administration and accountable politics in producing responsive decision making and strengthening local democracy (Kearns and Paddison, 2000; Stead, 2015).

Key institutional challenges in metropolitan governance involve the allocation and distribution of authority, capacity development, financial improvement, and social equity (Firman, 2008). Subsidiarity principles in resource and power or function allocation need to be applied in metropolitan governance (Ambruosi, et al, 2010; Gleeson and Spiller, 2012). Moreover, Firman (2008) argued that in managing metropolitan area, key factors that need to be considered are coordination mechanism to ensure the integration between planning and development as well as strong links to the national government system in order to obtain political support.

In Western Europe, the orientation of metropolitan reforms is to promote regional growth, integration, and competition for mobile capital investment in the context of globalization (Brenner, 2012). Considering the globalization of economy and competitiveness, metropolitan areas also need to sustain an attractive quality of life (Rondinelli, 2001). Furthermore, Kearns and Paddison (2000) argued that metropolitan governance needs to seek new ways to be creative, build strengths, and access and utilize resources in the face of growing social complexity and globalization. As stated by United Nations Human Settlement Programme (2009), planning for sustainable cities must be revisited by embracing geographical context and overcoming governance fragmentation.

Transformation in metropolitan governance can be analyzed through developing institutionalist framework and governance processes that require networks, stakeholder selection process, discourse, and practices as Coaffee and Healey suggested (2003). Rules and the roles of interactive processes should be also observed as the implications of dynamic governance (Edelenbos, 2005). In understanding how new institutional capacities get built, interaction between actors needs to be examined (Coaffee and Healey, 2003; Hudalah, 2014). Set of interactions appeared from the need to exchange resources to achieve the collective goals will define which actors are on the center of the network or at the periphery, and who will be excluded (Fawcett and Daugbjerg, 2012).

Uncertainties and complexity embedded in metropolitan area characteristic inherently can be analyzed by using network governance approach (Koppenjan and Klijn, 2004). Network governance is required in complex public decision making process ((Klijn (2005), Koppenjan (2007)). Klijn (2007) pointed out that decision making process from network perspective requires process management that involves content management, participation mobilization, and institutional design. In this perspective, the assessment of outcomes is not simply based on the realization of goals. Therefore, the outcome will be emphasized on the content, process, and institutional arrangement. According to Koppenjan and Klijn (2004), the content refers to the result of interactions of actors such as ex-post satisficing or win-win situations; the process might include the duration, stagnation, reliability, and innovation; lastly, the institutional arrangement is characterized by trust, quality of relations, and rules. In addition, problems are defined within multi-actor setting; thereby the problems are socially constructed based on perceived interests.

In applying network governance approach, several assumptions need to be considered as follows (Koppenjan and Klijn, 2004):

- Interdependencies between actors lead to more or less durable interaction patterns;
- Interaction patterns result in network characteristic, a shared language, shared rules, and mutual trust;
- Institutional factors constitute the behaviour of actors and influence cooperation in the network;
- Institutional characteristics result in a certain closedness of the network in relation to the outside world;
- When problems cut across networks, interaction and cooperation is restrained;
- Institutional factors are shaped, sustained, and adapted under the influence of interactions.

Concerning challenges of governing metropolitan areas, Sellers and Hoffman-Martino (2008) justified institutional alternatives for governance within metropolitan areas as below:

- Supra community reform

Fragmentation of municipalities limits their ability to deal with important issues that transcend their territories, e.g land use planning, the environment, public transportation, and economic development. Many local governments are perceived as inefficient and disconnected from the expectations of their citizens. Therefore, creating overarching metropolitan governments replacing a multitude of existing local authorities are in favor. However, many scholars argue that the optimum scale for public services are different from one service to another; hence it is difficult to estimate the right scale of metropolitan government (Newton, 2012).

- Territorial polycentrism

Metropolitan governments are criticized for their red tape, high operating costs, and remoteness from their citizens. It is more efficient and democratic for the localities within metropolitan area to compete among themselves for the production or sale of public services than to leave those services to one monolithic government entity to offer inhabitants wider choice of residential areas. Thus, small jurisdictions with multilevel governance are preferable. In this context, multilevel governance means inter-governmental relations between cities and their surrounding regions at different levels.

- The new regionalism

From new regionalism perspective, metropolitan governance should be understood as inter-municipal cooperation which is characterized by pragmatic responsiveness in execution; the adaptation of existing territorial units and governments above the municipal level to manage emerging challenges of metropolitan regions; strengthening democratic legitimacy; improving management in metropolitan area; and close association with private sector. In this perspective, coordination of strategies, interaction, and institutional support is essential. State governments are expected to focus on harmonizing interests from various stakeholders rather than to compel their own ideas.

Various models of metropolitan governance have been encountered as well. Those models are developed based on some criteria which are related to the key actors and goals. Hudalah et al (2014) distinguished the metropolitan governance models into three categories based on rational, historical, and sociological approach. As a result, metropolitan governance models can be recognized as three main forms including

voluntary cooperation, consolidation, and collaboration. Nevertheless, developing metropolitan governance models specific for sustainable cities by considering the aspects of governance process and institutional design still needs to discuss further.

Furthermore, Pierre (1999) described the models of governance through analyzing different sectors in urban politics and the degree of inclusion of organized interests in urban governance. Based on those analytical aspects, he differentiated urban governance into managerial (output performance oriented), corporatist (emphasis on the role of local government), pro growth (public private action oriented), and welfare (networks of government oriented) models. He also developed urban governance definition into three categories (Pierre 2015, p. 452-453):

“Governance as a theory offering analytical framework; governance as normative model showing model of public-private interaction and cooperation at the local level; and governance as an empirical object of study to investigate to what extent different social, political, and economic forces tend to produce different models of urban governance which require comparative approach”.

Feiock (2009) developed tools of regional governance using institutional collective action (ICA) approach. Based on ICA framework, metropolitan governance models can be distinguished into six main categories (Feiock 2009, p.361-374):

“Regional authorities offer the rescaling of geographic and functional jurisdiction. Managed or coordinated networks refer to the collaborative relations among local government actors, lead agencies/organizations, and network of private contracts. Regional organization is established based on federal/state laws, non profit organization, government agencies, regional councils, metropolitan planning organization, or regional partnerships. Contract networks link local government in legally binding agreement. Collaborative groups and councils involve informal associations, multilateral agreements and working group coordination. Policy networks refer to networks interaction, consensus, and flexibility in decision making”.

Digaetano and Strom (2003) constructed modes of governance into clientilistic, corporatist, managerial, pluralist, and populist based on governing relations, governing logics, key decision makers, and political objectives. Governing relations range from dominant client to inclusionary negotiation. Governing logics vary from reciprocity to mobilization of popular support. Key decision makers might involve politicians, clients, powerful civic leaders, civil servants, organized interests, and community movement leaders. Political objectives might be material, purposive, and symbolic.

In the case of Lisbon Metropolitan Area (LMA), the current governance system is based on two tiers of administration which mainly engage central government and local government although the coordination between the two is not intensive. Nevertheless, different institutional forms of cooperation have characterized its institutional arrangements. This situation has contributed to the perplexing administrative responsibilities and boundaries of service delivery in LMA. Silva and Syrett (2006) demonstrated that metropolitan governance in LMA has evolved historically and geographically through specific governance regimes and dynamic interaction of national state systems, local contexts, and broader global forces. Yet, they found out that institutional arrangements in LMA faced challenges in “leadership and strategic vision, coordination and integration of services, democratic legitimacy and accountability” (2006: 114). They also argued that central state apparently showed significant role in promoting structural governance change, primarily through decentralization process and interaction with EU.

Following the study of metropolitan institution in Swiss urban areas, Sager (2004) showed how different metropolitan institutional setting influence the quality of political negotiation process and the decision outputs. In his study, he categorized the coordination based on the policy implementation and formal and substantial rationality. Moreover, analytic dimensions of metropolitan government model have been operationalized according to the degree of centralization, consolidation, professionalization, and political economy. He discovered positive effect of fragmentation on the quality of deliberation since Swiss has applied very strong federalism principles. Furthermore, his findings revealed that “voluntary, positive, and policy driven coordination and substantially rational coordination decisions are found in centralized rather

than in decentralized institutional settings, in fragmented rather than in consolidated metropolitan areas, and in project structures with a strict separation of the political sphere of negotiation from the technical sphere rather than in negotiations without such clear distinction" (2004: 247).

Similar to the characteristics of metropolitan problems, spatial problems have also emerged in regional seas in the European Union (EU) since there is no single authority is responsible for the problems at the regional seas and there are various activities taking place in the marine space (Van Tatenhove, 2013). Consequently, joint actions through integrated marine governance arrangements are needed in dealing with environmental and spatial problems in the coastal areas in the EU. Van Tatenhove (2013: 300-301) mentioned that "the institutional setting of EU marine governance is shaped by different rules, arenas, practices, and locations that guide and shape the political and policy processes." He underlined that through understanding the nature of the swings of the governance pendulum (tension between fragmented arenas) and the institutional ambiguity (gap between institutional setting and specific jurisdiction), institutional capacity (ability to develop shared knowledge and mobilize resources) can be improved.

He further explained that the process of institutional change could be layering and conversion meaning adding new rules to the existing institutions and redirecting the existing arrangements. Finally, legitimacy is required to develop integrated governance arrangements. By legitimacy, Van Tatenhove (2013: 303) referred to "the acceptability of policy and decision making" that can be distinguished as "input legitimacy (representation), output legitimacy (problem solving), throughput legitimacy (the quality of policy making process), and feedback legitimacy (the outcome of the policy process and the quality of the feedback relations)."

4 THE CONCEPT OF SUSTAINABLE CITIES

The city can function as an engine of growth and offer opportunities for inhabitants to increase their well-being. A city is the place where resources and capital are concentrated, to be utilized or transferred. According to Van Pelt (1990), social welfare improvement in the long term, which is not impeded by the degradation of environmental amenities or productivity, can indicate the sustainability of city. However, a trade-off between social welfare and environmental quality typically exists. For example, to decrease poverty, developing countries mostly perform natural resource exploitation, which results in environmental quality degradation. Additionally, city sustainability can also be threatened by internal (e.g social behavior, government corruption) and external factors (e.g global climate change, wars).

For many decades, development approaches has largely accentuated economic growth as the main goal of development which eventually resulted in income inequality and environmental degradation. Gross National Product (GNP) has been widely used as the main indicator to measure the well-being and the progress

of development. However, as social and environmental issues are rising, policy makers need to consider other well-being indicators for the sustainability of human race, such as happiness (Hak et al, 2012).

Sustainable development was initiated to add new goals to the traditional approaches of development by showing concern on the shrinking capacities of ecosystems in the global context and the environmental impact of economic development. The notion of sustainability itself has been introduced since 1970s (Whitehead, 2003; Shaharir, 2012) and it became globally acknowledged after Bruntland Commission formulated the definition of sustainable development. The concept of sustainable development intrinsically put emphasis on how to control the development by recognizing that the environment has limited capacity to equally fulfill the needs of present and future generation.

The implementation of sustainability concept has different implications on different scales concerning that environmental risk has been transferred across space. Nevertheless, as the number of people living in the cities has been growing very rapidly, cities are considered to play a significant role in dealing with global environmental problems (Opp and Saunders, 2012; Nijkamp and Pepping, 1998). Cities have been suffered from environmental problems; however cities are also suspected as the major cause of the intensifying ecological problems. For example, lack of green open space and high level of carbondioxide emissions generated from automobile dependence in cities have created urban heat islands. Moreover, city expansion also leads to changes in biodiversity, soil, and natural landscape.

Numerous frameworks of sustainable cities have been developed. According to Davidson (1996), a sustainable city can be achieved by applying sustainable development principles within urban planning, which emphasises the importance of capacity building in planning processes. Moreover, an advanced understanding of social and technical changes needs to be embedded in urban planning practices, in order to overcome sustainable development challenges (Williams, 2010). Consequently, a transformation through social and political action is required, to achieve urban sustainability (Hopwood, et al, 2005).

Extensive definitions of sustainability have also generated various conceptualizations in the field of urban sustainability research. Chiesura (2004) stated that the quality of life has become the main variable in defining a sustainable city; e.g. urban parks which provide social services and hence promote urban sustainability. Kenworthy (2006) argued that urban form and transportation are essential elements in creating an eco-city. Meanwhile, Nijkamp and Pepping (1998) clarified that urban sustainability is largely affected by energy policies. Camagni (et al, 1998) revealed that a sustainable city can be created through the integration of socio-economic, environmental, and cultural developments, within interconnected spatial systems. Haughton (1997) developed models of sustainable urban development which adopts reforms in governance, markets, and regulatory aspects, in cities and their hinterlands. Whitehead (2003) viewed a sustainable city as an object of political contestation and socio-ecological regulation. Accordingly, sustainable cities are created through regulatory processes and political discourses, within specific geographical and historical context of urban spaces.

5 METROPOLITAN GOVERNANCE FRAMEWORK FOR SUSTAINABLE CITIES

Many debates over metropolitan governance only address the structure or the form of metropolitan governance whether it is derived from public choice or consolidation model (Visser, 2002). However, there is no clear evidence if certain model is more effective than the other model in dealing with transboundary issues in a metropolitan region. Furthermore, Visser (2002) emphasized that interlocal behavior of actors influenced by political and organizational culture dynamics should be taken into account to offer deeper understanding about what factors or motives that tend to trigger or hinder the interjurisdictional cooperation in solving metropolitan issues. Accordingly, it is important to understand the values and perceptions of the actors that drive their behavior in having interaction, framing the issues or formulating the policy options. By understanding this, more effective strategies on how to promote cooperation, reduce the conflict, and diminish the isolation can be offered.

Meanwhile, some scholars still argue that flexible structure, such as coordinating board or ad hoc metropolitan agency, can be an alternative to a rigid structure in facilitating the interaction between city managers or administrators and functional specialists (Leroux and Karr, 2007; Termeer et al, 2010). Affiliation structure or informal interaction through networks is assumed to have brokering capacity in enabling local governments to enter the collaboration, providing opportunities for more contact between actors, and increasing trust among actors. More attention needs to put on the network scale in improving metropolitan governance systems and sustainability policy arrangements (Termeer et al, 2010).

Concerning the complexity of governance and sustainability integrated approach should be applied in providing conceptual framework of metropolitan governance in developing sustainable cities. As it is understood that governance is a process instead of the means or ends, the process of governance itself should be clearly examined. Yet, many scholars only focus on offering alternatives of institutional arrangements from a single approach.

This study adopted the dimensions of governance process stated by Coaffee and Healey (2003) that entail networks and coalitions, stakeholder selection processes, discourses, and practices. Eventually, these dimensions of governance process affect the outcome of preferred institutional design or arrangements on one side. On the other side, institutional design which is envisaged through positions and rules also influence the process of governance in the metropolitan area. Integrated approach is applied in this study; thereby considering the social and economic relations in political processes, systems of cultural values, and the role of self-interest in collective action. Sustainability itself is a goals that requires common perceptions or shared languages from involved stakeholders. In this study, sustainable cities are conceptualized as the outcome of socio-ecological policies as previously expressed.

Nicholls (2005) argued that the mayor of central city recently does not have enough power to mobilize resources in implementing the policy agenda for the metropolitan area as the surrounding territorial actors are increasingly empowered. As a result, interdependency among actors promoting the emergence of network in dealing with metropolitan issues is inevitable. Furthermore, Nicholls (2005) justified the relation between hierarchy and interdependency which underlie the outcome of metropolitan governance ranging from highly integrated to highly fragmented.

Networks and coalitions refer to the process of network building and expansion as well as how the actors interact in formulating and implementing the sustainability plan. In analyzing networks, several key indicators need to be formulated; for example, the frequency of interaction, reciprocity in interaction, attributes of the nodes of interaction, and the structure of the nodes of interaction. Social network analysis method can be applied in revealing the patterns of relationships or interactions among actors.

Stakeholder selection processes include the informal and formal methods in determining which stakeholders will be involved in the policy making and coordination. In analyzing the process in stakeholder selection, how certain individuals or groups are included or excluded from the governance process needs to be identified. In addition, the type of influence that the selected stakeholders bring during the process is important to be examined.

Discourses refer to the process of framing issues, problems, solutions, and interests through the mobilization of public opinion or distributing knowledge. Since sustainability concept is still obscure to some actors, discourse about sustainable city is essential in order to achieve common language and effective strategies of sustainable development. Conflicting interests should be diminished through narratives or communication strategy and commitment of the actors in stressing the sustainability issues need to be strengthened.

Practices refer to recurring actions or customs which are mostly influenced by cultural aspect. Informal gathering could be another example of practices besides routine meetings. Through frequent informal gathering, actors can feel less tension and less self-centered (Hudalah et al, 2014). Cultural aspect, such as cooperative endeavour in the case of Indonesia metropolititan, could also strengthen the democratic decision making process.

Positions indicates the competence of actors and what actions that actors should take. In defining roles, responsibility of each individual actors should be clear. Besides, the capacity of actors in making decision regarding sustainability policies as well as mobilizing resources to implement the policies should be improved. Rules imply the procedures that have been produced at a certain time and applied for a certain period (Edelenbos, 2005). Important elements in procedures are transparency, accountability, and implementability.

Coordination, integration, and cooperation will be maintained by the network of actors if certain principles are fulfilled. Those principles are the need to cooperate to achieve the goal of individual actors, the benefits of cooperation outweigh the cost, and strong leadership in convincing individual actors to gain long-term benefit of cooperation and distributing material incentives to sustain the cooperation (Nicholls, 2005). Stakeholders from private sector and civil society need to be involved from the early stage of sustainability plan to promote interactive governance (Edelenbos, 2005).

6 CONCLUSION

Formulating and implementing policies in order to achieve sustainability are quite challenging in European cities, particularly at the bigger scale like metropolitan region. Policies formulated by each jurisdiction usually have impacts on other jurisdictions within the metropolitan area. It is undeniable that government from different level cannot work alone without involving the private sector and civil society in managing and distributing resources and space for the sustainability of the well-being of metropolitan residents. Therefore, the government together with other stakeholders needs to take collective actions and strategies to attain their common goals. This argument has become the fundamental concept of metropolitan governance. Nonetheless, numerous stakeholders from different jurisdictions have different interests and capacity resulting in dynamic interactions that could also lead to uncertainties or conflicts in the decision-making process. As a result, network approach is required to understand how the actors interact when

they involve in the metropolitan governance process. The process of interaction and decision making eventually will have implications on the institutional design of the metropolitan region.

Many models of metropolitan governance has been developed; nevertheless, none of them fits all. Each model brings different advantages and disadvantages in relation to endorse sustainable development of cities within the metropolitan area. Inter-local government cooperation should be pursued through network buildings. Nonetheless, conflict arised from unequal distribution of power regarding hierarchy in institutional arrangements needs to be managed through interactive mechanism of governance and strong leadership.

In determining which governance model fits the situation of the metropolitan, some principles need to be considered. The clarity of positions/roles and rules are required. Actors who hold important roles in mobilizing resources and networks need to be competent in formulating strategies of sustainable development. Moreover, the more transparent, communicative, and simple the procedures, the more likely sustainability to achieve because each individual actors can track the progress of sustainability, correct the misconduct, and evaluate the ineffective strategies more easily.

Apparently, the institutional design is not the only factor that affect the realization of sustainable development. Consequently, it should also be understood that governance process largely affect the implementation of sustainable cities. How often actors interact and how strong ties of relation have been built predominantly influence the quality of governance process in dealing with sustainability issues. Inclusive stakeholder selection process and intensive discourse on sustainable cities could be essential factors as well in promoting sustainable metropolitan development.

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ID 1656 | BRAIN TRAIN OR BRAIN DRAIN? EFFECTS OF HIGH SPEED RAIL ON THE SPATIAL STRUCTURE IN THE AGE OF THE KNOWLEDGE ECONOMY

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ABSTRACT: Transport infrastructures facilitate access to people, knowledge, and markets, thus increase the “potential of opportunities for interaction” (Van Geenhuizen et al., 2007: 7) of a place and stimulating economic activity, leading to urban development. Particularly in Europe, High Speed Rail (HSR) has been of growing importance in providing passenger mobility on medium distances. During the last three decades, HSR has connected more and more cores of metropolitan regions, airports, and sometimes also previously unserved peripheral places nationally and later internationally. Its spread occasionally also led to a reduction in rail accessibility when conventional rail services were subsequently reduced. At the same time, globalisation means that the ‘knowledge economy’ (KE) is becoming a key driver of development especially in highly developed countries. The performance of firms depends more and more on knowledge as production factor, and the input of highly skilled workers. Locational factors of knowledge-intensive firms differ from those of ‘conventional’ firms. They seek a combination of ‘global pipelines’ and ‘local buzz’ (Bathelt et al., 2004), i.e. global connectivity together with a stimulating local environment of face-to-face contacts. Under these conditions, HSR stations come into focus as potential new nodes for future economic development, since the immediate surroundings of HSR stations profit most from a gain in accessibility and provide ‘spaces for dialogue’, which are of particular relevance for KE firms. There have been several studies on the structural effects of HSR lines, especially in the cases of the French TGV and Spanish AVE networks. Despite the strong growth of ridership, hopes of a dispersion of economic development away from the metropolitan centres did not always materialise. Instead, some cases suggest that HSR access leads to ‘brain drain’ effects, upscaling on Mega-Regional levels, and residential ‘super-suburbanisation’ instead. Other studies argue that positive economic effects exist, but are merely of a redistributive nature. In each instance, the influencing factors augmenting economic development in the