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**The evolution of policy mobility embedded in urban regeneration:
A critical analysis spanning 30 years in Busan, South Korea**

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Declaration of Originality

I, Dongho Han confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature:

Date: 01 Apr. 2021

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Abstract

The ultimate aims of this research are: (1) to understand and interpret an urban regeneration project through the theoretical framework of policy mobility and (2) to explore the change and evolution of urban regeneration ideas and policy mobility processes in Busan.

From the early 2000s, Busan Metropolitan City, South Korea, experienced long-term structural changes and post-industrial decline under conditions of neo-liberalism and the flexible post-Fordist form of capitalism (Siegel and Weinberg, 1977, p.67; cited in Grant and Scott, 1996). National and local authorities therefore promoted urban regeneration projects as a strategic tool. Such urban regeneration projects were influenced by successful large-scale post-industrial urban regeneration projects in foreign cities. There has been a limited amount of research that addressed and explored the implementation of such urban regeneration projects (Shin et al., 2015). To articulate the relationship between the delivery of urban regeneration and knowledge circulation across the world, this thesis draws on the concept of policy mobility (McCann, 2008) as a theoretical framework. Differing from traditional policy mobility literature which usually focuses on mobilisation processes within a specific period, this study looks at the development of urban regeneration ideas and the evolution of policy mobility processes over 30 years (from the 1990s to the 2010s) in Busan.

Three consecutive urban regeneration projects – Centum City, North Port, and Eco-delta City – in Busan, South Korea were explored, and the policy mobility framework was conceptualised on these empirical case studies. The first half of this research investigates the implementation of individual urban regeneration projects through the policy mobility process. The other half of this study explores the development of urban regeneration ideas in the local area and ways in which the policy mobility process evolved over time in these urban

regeneration projects. To address these issues, qualitative methodology including an elite interview, document analysis, thematic and narrative analysis was used throughout the research.

The results of this research show that the idea of sustainability has been strengthened in urban regeneration over 30 years. Through the legacy of Centum City, developers focused on securing enough funding for the delivery of a large-scale urban regeneration project. In the North Port project, eco-friendly approaches within the development site were important. The impact of community participation began in the North Port project and became significant in the Eco-delta City project. Regarding policy mobility processes, it was experimentally begun in Centum City. Based on the active role of international resources, North Port became a conventional model of policy mobility. Eco-delta City, however, can be described as an innovative failure model of policy mobility due to the inappropriate transfer. Overtime, actors engaged in the processes varied across projects.

Also, vague ideas, knowledge and ideal images in addition to clear forms of programme or policy were transferred to Busan. Policy mobility processes occurred in more diverse spatial settings, not being limited to conventional spaces. Overall, the idea of urban regeneration and the policy mobility process have been developed and evolved by city-specific political and development processes, being influenced by underlying factors such as local temporal and spatial contexts that impacted the circuit of knowledge and policy processes.

Impact Statement

The author of this research strongly believes that researchers should conduct their research to improve their society in a positive way. Thus, research should not be conducted only for the sake of research but should contribute to society in a practical way. This research also began based on such a belief and hopes to provide the society with both benefits inside and outside academia.

Regarding benefits inside academia, this research provides an empirical case study in an Asian context regarding urban regeneration and policy mobility. As the Asian local city is analysed by urban theories used in Western academia, it contributes to comparing the differences between western empirical cases and an Asian empirical case. Since the empirical cases used in this research are not in a global city, it is meaningful to show an urban phenomenon of a non-global and common local city of the world. Furthermore, by identifying the longitudinal change of urban regeneration and policy mobility, this research would narrow a research gap, a lack of historical perspective in policy mobility literature. It highlights important historical continuities, genealogies and institutional legacies of contemporary urban policy circuits and pathways.

On the other hand, in terms of the benefits outside academia, this research would be helpful in practice particularly in the delivery process of urban policy. In South Korea, both central and local governments have been interested in transferring Korean (localised or Korean-made) policies and knowledge to other countries and cities. In particular, both governments are keen to develop an effective way of exporting such policies. Through the analysis of interaction between the international idea and policies and the local context over time, planners, politicians, civil servants and academia could refer to the tendency of the policy and knowledge circulation process and adapt such a tendency in practice.

Although this research was begun with a simple interest about a local area, hopefully it would result in contributing to the actual policy-making process in the local area as well as the academic field in the long-term

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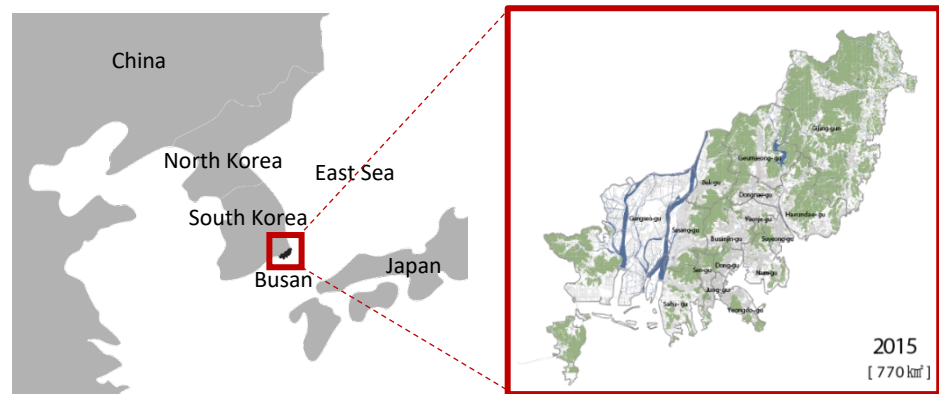
Chapter 1 Introduction

The beginning of this research

Busan, South Korea's second largest city, is located all the way across the country on its southeastern coast (Figure 1-1). Maps, buses, construction sites: all periodically remind us that we are in 'Dynamic Busan, City of Tomorrow'. This slogan strikes me as, in equal parts, apt and mistaken. While I feel bullish about Busan's future, that has nothing to do with the seaside metropolis's firm grasp on the 21st century. The appeal of Busan – indeed, a reason to prefer it over Seoul – comes not from what it offers as a city of tomorrow, but what it offers as a city of yesterday.

- The Guardian (Marshall, 2014)

Busan, with its multi-layered contexts, is a city in which the past coexists with the present and arguably the future. As the first harbour city, the second largest city of South Korea and one of the two cities which survived the Korean War and served as the provisional capital during the war, the city of Busan harbours rich stories of history, geography, economics, politics, society and culture. As seen in the city slogan 'Dynamic Busan', Busan has a unique characteristic which is fast culture in which people commonly use the Korean term 'ppalli ppalli (fast, fast)' which reflects the speedy work style that also applies in business and institutional settings (Schäfer, 2017). This reflects the history of Busan, which as the first international port city in South Korea, has become familiar with rapid change and development and a mixture of international and local culture.



*Figure 1-1 Location of Busan Metropolitan City, South Korea
(source: Busan Development Institute, 2015; Revised by author)*

This tendency directly reflects on the process of urban development and planning. Since the 1990s, due to the restructuring of industry, global competition and urban deterioration, the city government of Busan endeavoured to revitalise the local economy as well as the urban area. As a result, large-scale urban regeneration projects in brownfield were implemented dynamically over time.

The rich and complex layered contexts of the city of Busan would have great implications on the relational dynamics of the urban regeneration process but a thorough and systematic understanding of urban regeneration in Busan has been absent. Research regarding urban regeneration, particularly concerning large-scale urban regeneration, in South Korea has mainly focused on Seoul, the capital city of South Korea, and its provincial areas, which have been analysed by various academic frameworks (Shin et al., 2015, Sonn and Kang, 2014, Gallent and Kim, 2001, Kim and Gallent, 2000, Hae, 2017).

However, it is difficult to apply research outcomes of Seoul to the city of Busan because the two cities have very different circumstances and characteristics. For instance, regarding Seoul, the population has been increasing constantly and as the capital city, diverse industries are centralised in Seoul. Many urban policies of not only the city government but also the national government are focused on

supporting the capital city. However, in terms of Busan, the population has decreased, and communities have shrunk at the most rapid speed in South Korea. At the same time, there are not many industries except harbour logistics (based on the characteristics of a port city) and manufacturing industry to support the city. Hence, the city government had to promote urban regeneration as a growth machine. In other words, urban regeneration in Busan tends to impact the city more directly compared to Seoul.

Moreover, the city of Busan is one of the cities in South Korea which continues to be heavily impacted by international ideas and trends due to its geographical and historical context. In the 1910s, its geographical location as the first harbour town made the city responsive to Japanese products and cultures early on. After the Korean War between the 1960s and 1980s, the South Korean government encouraged the city to apply developed countries' technology as a harbour city central to the government's export-led economic development strategy. Since the 1990s, due to the success of the international annual mega-event, Busan International Film Festival, the city became an international cultural centre particularly among Asian countries. With such a historical context, Busan is a city which is familiar with the reception of international ideas and exports its products and this pattern is also seen in the field of urban regeneration.

Considering such a context, this study aims to answer the following questions regarding urban regeneration in Busan:

- How did projects in Busan deliver the idea of urban regeneration?
- How did the meaning of urban regeneration evolve/develop over time?
- To what extent did the interaction between international ideas and local context impact on the delivery of urban regeneration?

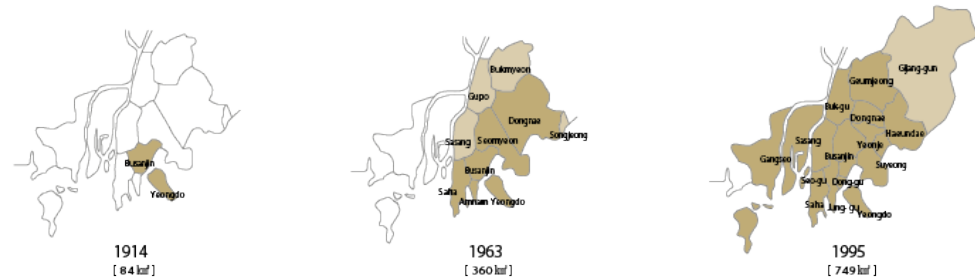
Hence, the result of this research will provide an empirical case that demonstrates how international trends, knowledge and policies from other countries and cities have impacted on the delivery of urban regeneration in cities which import trends, ideas and policies from others. The remaining part of this introduction presents a brief account of Busan and the empirical cases that will be discussed in this research. Then, the conceptual framework and the aims of this research will be given.

Brief Context of Busan & Empirical Cases

From a tiny harbour area in the 1910s, the city of Busan has geographically grown more than nine times over a century (Figure 1-2). Busan was firstly formed in the current old downtown with an area of 85.15 km² in 1914. After a complicated urban history including a period of Japanese colonial rule and the Korean War, the area of Busan expanded to 360.25 km² by incorporating some town areas outside the urban space. In 1963, the city was upgraded to a municipality, which is governed by its own administration although the central government still strongly intervened. In 1995, Busan Municipality was renamed as Busan Metropolitan City, expanding its area to 749.17 km². Contrary to Busan Municipality, the Busan Metropolitan City was protected by the Local Autonomy Act which aims to promote more sophisticated democracy and efficiency of local autonomous administrations. Since 2015, the administrative district of Busan Metropolitan City accounts for an area of around 770 km².

Through the expansion of land areas and restructuring of administrative districts, the city of Busan has experienced dynamic changes and unprecedented urbanisation over the last 60 years. In the 1960s, the city experienced severe urban densification due to a rapid increase of population (Busan Metropolitan City, 2017). The underdeveloped urban infrastructures were reconstructed, and the modern public transportation system was created. In this period, the

city of Busan became the most developed urban area in South Korea, second to the capital city.



*Figure 1-2 Restructuring administrative districts of Busan Metropolitan City
(source: Busan Development Institute, 2015; Revised by author)*

Since the 1980s however, through the expansion of a new urban centre and the shrinkage of the old urban centre in Busan, a number of urban problems has been raised particularly regarding the deteriorating built environment, shrinking local economy and an aging community. As the city of Busan expanded, the number of old urban spaces including old buildings increased. Since Busan Metropolitan City is one of the oldest cities in South Korea, there were a myriad number of empty old buildings (established more than 40 years ago) and abandoned brownfields (e.g. previously used as a city airport and an old port) in the urban centre. Such derelict and spacious space needed to be developed.

In the 1990s, Busan Metropolitan City particularly suffered a severe economic recession due to long-term structural change and post-industrial decline. Traditional local industry (secondary industry) and relevant facilities, urban infrastructure, buildings and the urban centre with its adjacent areas became derelict rapidly. The local government endeavoured to intervene and solve such challenges under the name of urban regeneration. The concept of urban regeneration was introduced in South Korea in the 2000s, as a strategic tool to achieve

economic revitalisation, reverse social decline, and improve environmental quality by refurbishing derelict areas.

The city government tried to create an attractive city image for commercial purposes (Smyth, 2005) by preparing to encourage the settlement of the next generation service industry. Significant investment was injected into the infrastructure, tourist centres, hotels, offices, leisure and retail facilities, and more urban green space (Marshall, 2004). It aimed to create and expand the tourism industry, which could act as a catalyst for further growth of commercial areas and consumption opportunities (Doucet et al., 2010). Furthermore, consecutive mega events such as the 2002 FIFA World Cup Korea/Japan, the 2002 Asian Games, and the 13th Asia-Pacific Economic Cooperation summit also supported the urban regeneration project by attracting a number of foreign consumers into the urban area.

Currently, the scope of urban regeneration in Busan, South Korea varies from the traditional property-led development (or a mixed-use development for residential, commercial, cultural, institutional and industrial uses) to the idea of the smart city which provides a new urban paradigm as a future city. To explore the urban regeneration which has been delivered within actual projects in Busan, this research selected three large-scale urban regeneration projects. These projects began consecutively from the 1990s to the 2010s and each represents a project in an individual decade. In this circumstance, it is also possible to investigate how the meaning of urban regeneration has evolved over time across three decades. In particular, as stated at the very beginning of this chapter, this research will focus on the dynamic characteristics of the city of Busan. These are the interaction between international ideas and local context which occur through the circulation process of policy and knowledge particularly concerning urban regeneration, and its impacts on the delivery of individual urban regeneration projects. Furthermore, the scope of this research will be expanded by

comparing individual projects and examining the evolution of the circulation process of policy and knowledge.

Empirical Case 1: Centum City

Centum City is located on the eastern side of Busan, the geographical centre of Busan. It was not been developed until the mid-1990s as it was owned by the Ministry of National Defense for use as a military airport. However, the space was actually used as a container yard (or empty space) because the military airport was moved into the new city airport, located in the suburban area, west of Busan. As the former spacious area was not developed, civil servants and planners regarded such space as a great opportunity for revitalising the local economy and brownfield in the urban centre. Moreover, in the 1990s, the city government promoted new generation industries (film industry and tourism industry) by using a successful annual mega-event, Busan International Film Festival. Hence, the unused area was a good candidate space for an industrial cluster or an agglomeration of such relevant industries. In this background, Centum City project, a flagship regeneration project and the first large-scale urban regeneration project in South Korea as well as Busan, was implemented.

Empirical Case 2: North Port redevelopment

North Port is the most symbolic area of Busan. It led the city of Busan to become the first harbour city in South Korea between the 1960s and 1980s by managing the national industry of port logistics. In this vein, North Port which is located in the centre of Busan geographically and its adjacent area was an urban centre of Busan until the 1990s. However, due to industrial restructuring and the limited capacity to handle huge numbers of containers (which increased rapidly in the 1990s due to globalisation), the port area deteriorated. Since it is a quite spacious area located in the former urban centre next to the Busan Railway Station, the South Korean government as well as the Busan Metropolitan City government endeavoured to regenerate the area by injecting a group of

interventions including ecological, economic and social investments. The North Port Redevelopment Project has been implemented since 2008 even though there has been a plethora of issues regarding governance, community participation, policy, funding and institutions.

Empirical Case 3: Eco-delta City

Eco-delta city is located on the very western side of Busan. Since Eco-delta city is surrounded by the Nakdong River, the area was traditionally used for farmland. However, as the demands for development (housing, in particular) became higher, both the Korea Water Resources Corporation (the governmental agency for comprehensive water resource development) and Busan Metropolitan City government decided to develop the area in 2017. Furthermore, due to the increase of global interest about the idea of a smart city, the South Korean government attempted to develop the concept of a smart city within an actual project. As the Busan Metropolitan City government, the city government had already experienced a former version of a smart city, U-City, since 2007. As the city government of Busan needed a new urban growth machine, the national government's intention to develop a smart city was a good opportunity for the local government. In this context, the Busan Metropolitan City government applied Eco-delta City as a candidate for the national pilot smart city project. As a result, Eco-delta City was finally designated as one of two national pilot projects by the national government. As of now, 2020, the construction of the urban infrastructure has been completed.

Conceptual Framework

To address the circulation process of policy and knowledge particularly concerning urban regeneration, this research will draw from the framework of policy mobility. Then, why has policy mobility been chosen for this research? Through globalisation, successful large scale post-industrial urban regeneration in global cities such as London, Vancouver, and Baltimore has attracted attention and many

policy makers, urban planners and international architecture firms have endeavoured to emulate similar types of redevelopment projects the world through the urban policy making process (Marshall, 2004; Figure 1-3). In the academic field, a number of researchers have explored and interpreted such processes of policy and knowledge circulation with various theoretical frameworks: lesson-drawing (Rose, 1991); policy convergence (Bennett, 1991); policy diffusion (Marsh and Sharman, 2009); and policy transfer (Evans, 2009).



Figure 1-3 Large-scale urban regeneration projects across the world (source: author)

Such traditional theories regarding policy and knowledge circulation usually focused on individual actors who delivered policy and knowledge with individual intention, a clear policy and knowledge which has been delivered from one context to another context in complete form. However, complete transfer of policy and knowledge hardly occurs in practice due to the dynamic complexity of post-modern society and the number of contingencies of urban conditions

as mentioned by Healey (2007, p.221). Furthermore, contemporary urban areas are produced and reproduced by networks of histories, socio-political structures, social relationships, movements of labour and capital, and communication between cross-scale governance entities. In other words, conventional literature largely under-emphasises the detailed context which explains how outcomes are derived through the process of interaction and relations among actors in the policy and knowledge circulation process (Dolowitz and Marsh, 1996).

The theory of policy mobility, on the other hand, focuses on mobilisation and dynamic entities and their interactions and relations, going beyond a perception of policy and knowledge as clearly formed static objects (Massey, 2004). Under such relational thinking, urbanism models (best practices and examples) can be conceptualized as 'bundles of expertise, techniques, learning, and knowledge brought together for particular purposes, and codified in the forms of policy, planning, or design strategies' (Cook and Ward, 2013, p.779) When a policy is 'in motion,' the pathways and mutations as it travels are as important as the policy itself and the places it influences. This conceptual framework leads scholars to answer the question of how the local and immobile or fixed aspects of a place (described as local context) interact with policies mobilized from elsewhere through empirical research (McCann, 2011, McCann and Ward, 2011, Temenos and McCann, 2012). Thus, the concept of policy mobility is used to frame the three empirical case studies in this research by analysing the roles of a broader mix of governance entities and examining how single actors and organisations initiate and facilitate the domestic and international movement of policy ideas, knowledge, and programme.

Thus, in addition to an approach based on the idea of policy mobility, the conceptual framework in this research will conduct in-depth analyses particularly concerning the following points. First, this research expands the scope of analysis by analysing an inter-scalar

governance structure. Policy mobility literature believes that the circulation of policy and knowledge is not simply an intended process but happens through a type of assemblage of international trendy ideas, relevant actors, spaces, and local contexts such as the local economy, policies, and governance framework. In this research, the policy mobility framework will be used to interpret and address in a detailed way how policies involved in urban politics and policymaking are transferred beyond their originating cities (McCann and Ward, 2011). It brings about more analysis of the policy and knowledge circulation process in relation to the transnational and trans-local constitution of institutional relations, governmental hierarchies, and policy networks.

Furthermore, policy mobility literatures usually assume that only successful knowledge and policy is mobilised. However, deciphering the meaning of success and failure is not a simple issue. Definition of both is tied up with the interests of those who can harness what might be called success and failure of policy and knowledge and it emphasises that success and failure are relationally produced (Temenos and McCann, 2013). This requires further investigation of contextual factors that play a considerable role in the policy adoption process merging with existing policy/politics. Diverse variables such as economic, political, institutional, and environmental factors should be examined because such aspects are in relation to the localisation of international ideas (Stein et al., 2017).

In a newly raised perspective, the relationship between actors and power – which is interpreted as authority, reputation, knowledge, and information, which influence actors in the policy making process – also should be paid attention (Werner and Strambach, 2018). Due to globalisation, the role of global actors such as a starchitect, private developer, and global firm became significant in the policy mobility process. Their power and global competencies including pressures and incentives variously enable and constrain the circuit of the policy and knowledge process. Furthermore, currently, the implications of

international ideas and knowledge vary depending on the actors' reputation. So, the way in which actor's power influences or shapes a type of idea or knowledge that is applied in a certain setting will be examined.

The conceptual framework of this research also explores and summarises the evolution of the urban regeneration idea and the development of the knowledge and policy mobilisation process comprehensively over time. Scholars usually concentrate on the circuit of specific knowledge and policy/best practice and underemphasise a long-term exploration of the way in which the mobilisation process changes and evolves over time. By examining the evolution of the policy mobility process, this research will articulate the characteristics of policy mobility in Busan, South Korea and by investigating the change of the mobilisation process, this research can describe which factors are emphasised or underemphasised in the circulation of urban regeneration process.

The aim of this research

In sum, this study which focuses on urban regeneration and policy mobility will be concerned with the way in which policy mobility has changed and evolved over time through policy making techniques and governance systems in the local context. It also emphasises the study of politics, power relations between actors and mobile spaces as they relate to knowledge and policy circulation within the implementation of urban regeneration (McKenzie et al., 2015). Thus, the first half of this research is to explore the policy mobility process of individual urban regeneration projects (the interaction process between the local context and international ideas) and the way in which the policy mobility process evolved over time (among three consecutive urban regeneration projects). The other half of this study will investigate the development of urban regeneration idea in the local area of Busan, South Korea. By doing so, this research aims to answer the following research questions:

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- To what extent has policy mobility been incorporated into individual urban regeneration projects and how has this been changed over time through three different projects?
 - What is the relative influence of local contextual factors and international policy mobilities in determining the narrative of urban regeneration in Busan and how does this change over time?

These two research questions emerge from two assumptions: that the idea of urban regeneration and the policy mobility process have been developed and evolved by city-specific political and development processes over time and that underlying factors such as local temporal and spatial contexts have a continuous influence throughout the circuit of policy and knowledge process. To address this issue, this thesis will draw on the concept of policy mobility (McCann, 2008) as a theoretical framework. Furthermore, to conceptualise the policy mobility framework on empirical case studies, three consecutive urban regeneration projects in Busan, South Korea will be explored. Qualitative methodology including elite interviews, document analysis and thematic and narrative analysis will be used throughout this research.

This thesis will attempt to make three main academic contributions. Foremost, it might be a valuable contribution as it broadens the scope of policy mobility scholarship by exploring the evolution of a policy mobility process in a unique local context and reveal the characteristics of policy mobility within South Korea. Furthermore, the implementation of urban regeneration in the local area will be discussed and addressed more deeply by using a multi-level approach within a policy mobility. Since urban regeneration projects are usually large-scale mixed-use development, they are conducted by a number of actors, with various interests, influenced by dynamic politics across global, international, and local boundaries. Based on relational theory, the multi-level approach within a policy mobility enables such intricate circumstances to be interpreted and

addressed effectively. Lastly, examining the changing characteristics of a policy mobility over time will broaden the scope of policy mobility scholarship in terms of widening the historical perspective in policy mobility. Previous research regarding the mobilisation of policy and knowledge usually concentrated on a mobility process of a single empirical case within a specific time period. Thus, not only focusing on a specific policy mobility process but also exploring the development of a policy mobility is a valuable method in that it can compare the characteristics of several policy mobility processes in different temporal periods.

This thesis is composed of nine chapters. First, this chapter introduced the background of this thesis and clarified the research questions in the research briefly. In chapter two, previous literature regarding policy mobility will be discussed in detail to navigate the academic position of this research. In chapter three, based on research gaps articulated through a literature review, research design such as research questions, empirical case studies, conceptual framework, and methodological framework will be established. The overall context of Busan, South Korea for the in-depth appreciation of individual urban regeneration projects will be investigated in chapter four. From chapters five to seven, three consecutive urban regeneration projects will be analysed. Each individual chapter will have its unique story based on the main findings. Finally, in chapter eight, this research will bring the findings from the three consecutive urban regeneration projects together to analyse how policy mobility has evolved and changed over time and to what extent the idea of urban regeneration has been developed over time in the city of Busan, South Korea. As the last stage, a brief conclusion with the limitations of this study will be added.

Chapter 2 Literature Review: Policy mobility

Introduction

Within the framework of urban entrepreneurialism, spatiotemporal barriers have been removed and globalisation with cross-border economic processes – such as the growth of multinationals, rapid exchange of information, increased flows of labour, goods, raw materials, tourists and capital (Sassen, 1991) – has resulted in cities and regions becoming more interconnected. This encouraged nation-states, international institutions and transnational corporations to exchange and transfer best practices and to stimulate learning between cities and regions through dissemination and exchange of policy models (Hamedinger, 2017). As a result, many countries and cities have very similar types of city images. Questions such as these arise; why and how have such ideas or policies been circulated? Who is involved in such a circulation process?

The idea of knowledge and policy circulation has showed up in policy process discussions as one major branch of literature. Easton's system theory (Grin and Loeber, 2007) was used to understand policy making process traditionally. The system model illustrates the policy process as a linear 'conveyer belt' (Stone, 1999). In this system, pressures from society (eg. urban deterioration, pollution and social inequity) might be inputs for the political system. As a result, politicians translate such societal pressures into policies which could be resolutions for these pressures. Knowledge circulation theories, in particular, have sought to address the complicated relation between the resolutions (knowledge and policy) and power (someone who can access and manage the resolutions) in the policy process, and to explore changes in ideas as a central factor in understanding the knowledge and policy circulation mechanism (Sabatier, 1991).

Since the 1980s, theories of knowledge and policy circulation have moved away from system theory and have drawn much attention from diverse perspectives. Most of this is situated within the sphere

of political science and political economy, but also extends to social science, human geography, geographical innovation research, political sociology, international relations, comparative institutionalism and critical geography (Peck, 2011, Harris and Moore, 2013). These different fields identify different concepts, meanings and effects with different types of characteristics (Figure 2-1) which include the following examples - 'Bandwagon' (Loganberry, 1990; cited in Evans, 2009), Policy Convergence (Bennett, 1991), Policy Diffusion (Majone, 1991), Social Learning (Hall, 1993), Policy Emulation (Howlett, 2000), Lesson-drawing (Rose, 1991), Policy Transfer (Dolowitz and Marsh, 2000), and Policy Mobility (McCann, 2008). Such theoretical concepts, regardless of being diverse in nomenclature, are similar in that they share an overlapping conceptual core: what are the subjects of knowledge and policy circulation; what are the objects of knowledge and policy circulation; where does such knowledge and policy circulation happen and to what extent is the knowledge and policy circulation supposed to contribute to the policy making process? For example, sociologists under the idea of network perspective emphasise a decentralised concept of social organisation and governance by investigating actors involved in knowledge and policy circulation. Thus, they argue that the circulation process emerges through the purposeful interactions of individual actors (Kenis and Schneider, 1991).

While there is well-established literature which is comprised of valuable comparative studies and encyclopaedic analyses of these concepts (Stone, 2001, McCann, 2011), this section discusses the theory of policy mobility in particular. To navigate the proper position of this research and to find the research gap in previous literatures, the following part summarises the theoretical mapping of knowledge and policy circulation (by focusing on diverse mechanisms of knowledge and policy circulation and impacts of agencies on the circulation mechanism), policy mobility and urban regeneration within policy mobility. In turn, a brief conclusion of this chapter and the research gap that this research will address will be articulated.

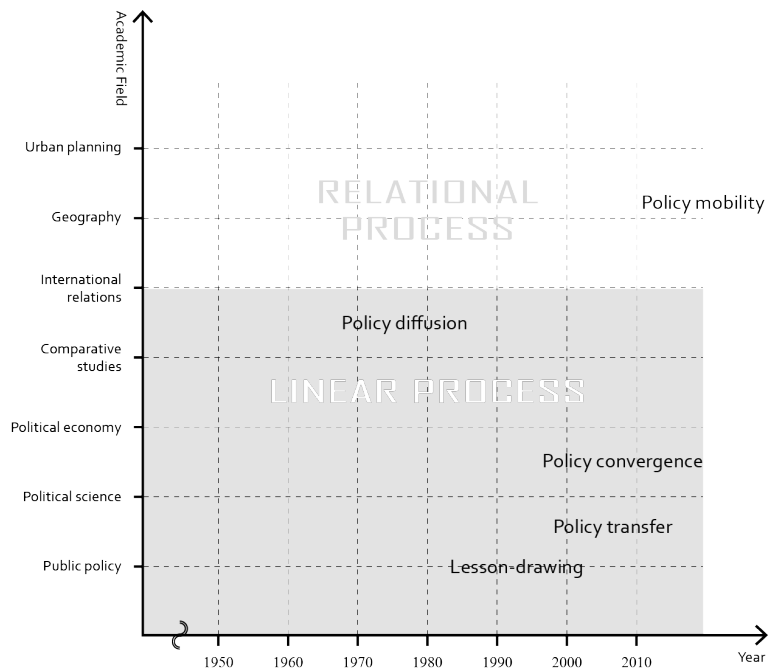


Figure 2-1 Theoretical mapping (knowledge and policy theories commented on this chapter) (source: author)

Before policy mobility

Globalisation enables people to share knowledge about cities at a distance across the world through new forms of electronic tools and applications. Over the last two decades, research about the circulation of international urban policy and planning models has been conducted by many scholars. Especially within the field of modern urban planning, knowledge and policy circulation has become popular as policymakers were confronted with a myriad of interdisciplinary urban problems such as urban deterioration, gentrification, environmental problems, and economic recession. In order to resolve such issues, there have been both government and academic institutions, organisations and technologies that ‘frame and package knowledge about best policy practices, successful cities, and state-of-art ideas’ (McCann, 2008, Harris and Moore, 2013). The following part will discuss some main concepts of such knowledge and policy circulation in previous literature.

The cradle of the theorised literature on knowledge and policy circulation is arguably lesson-drawing by Rose (1991, 2004). He defines that 'lesson-drawing is about whether programmes can transfer from one place to another' (p.5). According to Rose, a lesson is knowledge that is instructive, a conclusion about a subject drawn after the collection of facts from observation or experience. Lessons might be historical experiences of a country, consideration of institutional constraints, normative preferences, and the inertia of established programmes. The actors of learning are civil servants who are social engineers rather than political theorists seeking to apply knowledge instrumentally. Rose (2004) mainly focuses on how the lesson-drawing process occurs and suggests five ways of drawing a lesson: copying, which means direct and complete transfer; emulation, which transfers the concepts or ideas behind the policies with the consideration of local circumstances such as history, culture, and institutions; hybridisation and synthesis, which combine elements of programmes of best-suited practices as new and effective domestic programmes; and inspiration, which uses programmes elsewhere as intellectual stimulus for developing a novel programme elsewhere. It is likely to happen when policymakers travel abroad. Lesson-drawing differs fundamentally from the theory of policy convergence (to be explained below) which only concentrates on explanations of the fact. Furthermore, lesson-drawing scholars provide policymakers with a prospective evaluation before adopting relevant lessons. They combine empirical evidence regarding how and why a programme works in one context with hypotheses about its likely success or failure in another context (Rose, 1991).

Although Rose (2004) asserts that lesson-drawing is an umbrella concept which covers different approaches and different conceptualisations of knowledge and policy circulation, scholars hold their own idea on the circulation process based on specific perspectives of their academic ground. The concept of policy convergence originally emerged in the field of comparative policy

literature. The idea stems from a common conclusion that a range of diverse studies reached – advanced industrial states are facing similar problems and are tending to solve them in similar ways. As convergence in the urban context might be defined as ‘the tendency of societies to grow more alike, to develop similarities in structures, processes and performances’ (Bennett, 1991), policy convergence arguably means one of the following things: a convergence of policy goals (dealing with common policy problems); of policy content and instruments (formal manifestations of government policy such as administrative rules and regulations); of policy outcomes (impacts or consequences of policy implementation); or of policy style (the process by which policy responses are formulated) (Bennett, 1991).

The idea of policy convergence has generally focused on regional integration, on a macro-level, through the range of social and economic forces produced by industrialism. However, such convergence theory is framed as a somewhat imprecise and general formulation that obscures complex political and ideological factors. Scholars tend to focus on diverse and variable conditions of policy convergence stages. In this context, Bennett (1991) suggests a fourfold framework of processes aiming to identify the most common structural and procedural variables regarding findings of policy convergence: emulation; elite networking and policy communities; harmonization and penetration. The core idea of emulation is the utilization of empirical evidence about programmes from overseas and a drawing of lessons consciously from that experience. However, such evidence cannot totally prove the mechanism of emulation. Thus, researchers should undertake a careful content analysis of laws and regulations of public policy and collect enough evidence of such content between two contexts. In terms of elite networking, policy convergence results from sharing ideas amongst a relatively coherent network of elites engaging in regular interaction and consensus at the transnational level. Convergence is regarded as an outcome of identifiable elites surrounded by knowledge and expertise about urban policy problems and resolutions. Harmonizing policy

requires a coherent group of transnational actors, a broad consensus of motivation, and regular opportunities for interaction. Based on such conditions, harmonisation facilitates the shaping of a common response against common problems by avoiding unnecessary discrepancies and mitigating the unintended external consequences from domestic politics. In contrast to the harmonization process, the penetration mechanism refers to situations in which states are forced to conform and adapt to external actors' actions. Such a process happens when external actors participate in the domestic policy decision-making process through discussions of 'the selection of goals, the allocation of costs, and the mobilization of resources and capabilities' (Siegel and Weinberg, 1977, p.67; cited in Bennett, 1991).

There is another concept which focuses on identifying knowledge and policy circulation mechanism, termed policy diffusion. The idea of policy diffusion studies became popular when Walker (1969) was interested in the circuits of innovation across states or countries by using a quantitative methodology. The policy diffusion idea often presumes that there are common problems and a common response, regardless of independent political cultures. They have produced a number of studies dissected threefold, seeking to identify: the patterns of diffusion regarding different innovations, the characteristics of innovators and late adopters, and the impacts of innovation's attribution and adopters' characteristics on diffusion rates (Rogers, 1995, Shipan and Volden, 2008).

Policy diffusion researchers attempt to specify four major mechanisms: learning, competition, coercion and mimicry (Marsh and Sharman, 2009). Learning implies a 'rational' decision by governments to emulate foreign institutions' practices partially or completely and to produce more efficient and effective policy outcomes. International competition explains how policy diffusion happens, as more and more countries have come to adopt broadly similar investor-friendly policies due to the growing importance of capital mobilisation. This context encourages developed countries to

keep pace with rivals' economic policies. Coercion commonly comes from powerful states or international organisations such as the International Monetary Fund (IMF) and World Bank. This mechanism is particularly prevalent in developing countries. Finally, mimicry explains the process of copying foreign models in terms of symbolic or normative factors such as modernisation and rationalisation (DiMaggio and Powell, 1991, cited in Marsh and Sharman, 2009), rather than a technical or rational concern with functional efficiency.

Furthermore, many policy diffusion scholars also seek to explore when the mechanisms take place and why one mechanism may affect some cities earlier than would another mechanism. Shipan and Volden (2008) suggest two hypotheses: the temporal nature and the conditional nature of each mechanism. The temporal nature of each mechanism assumes that different mechanisms have time difference effects. For example, in the mechanism of imitation, policy makers desire to follow what a leader city has done. This leads to their immediate response for policy adoption. On the other hand, learning and competition require a slightly longer time for policy adoption because policy makers need to evaluate the effectiveness of knowledge and policy and to conduct a value judgement in advance. The conditional nature of each mechanism presumes that there might be numerous criteria which bring about time difference effects. For instance, a large city may have relatively short-term effects compared to a small city because the large city tends to have a slightly larger professional government which is more productive and organised.

However, clearly categorised and limited mechanisms cannot be fitted in the empirical case studies. In particular, the consideration of agencies engaged in the knowledge and policy circulation process was under-emphasized in the previous literature. Scholars in the field of public policy are keen to understand the process of knowledge and policy circulation process, under the concept of policy transfer, with enquiries about: who participate in the process, and to what extent the degree of circulation has been conducted by agencies

(who have various roles). Policy transfer is a theory of 'policy development that seeks to make sense of a process or set of processes in which knowledge about institutions, policies or delivery systems at one sector or level of governance is used in the development of institutions, policies or delivery systems at another sector or level of governance' (Dolowitz and Marsh, 2000). The idea of policy transfer mainly theorises the role of actors and institutions involved in knowledge and policy circulation, and how the intended actions of such agencies impact on knowledge and the policy circulation process.

Policy transfer researchers believe that knowledge and policy circulation is largely based on the interpersonal interactions of agents such as bureaucrats and politicians within inter-organisational settings in a process of action-oriented intentional learning (Evans, 2009). In detail, scholars have attempted to identify diverse types of actors (Dolowitz and Marsh, 1996, Stone, 2000, Evans, 2009, McCann, 2011), usually categorised into three groups: local policy actors, the global policy 'consultocracy'¹ (Hodge and Bowman, 2006, p.99), and informational infrastructures. Local policy actors include policy professionals such as urban planners, civil servants and private policy consultants who provide professional analysis and expertise to the state and civil society groups such as political activists. (Dolowitz and Marsh, 1996; McCann, 2011). The global consultocracy consists of individuals, firms and think tanks within two main groups: outgoing policy consultants and incoming policy consultants. The outgoing group usually attempts to gather information of best practice from elsewhere, aiming to mobilise it across different places through the incoming group (McCann, 2011). Informational infrastructures include trainers, professional organisations, and supra-local policy organisations, who have a great impact on the dissemination of expert policy knowledge (McCann,

¹ Consultocracy is a term which means high influential private sector management consultants on the reform and agenda processes of the public sector (Hodge & Bowman, 2006, p.99). This has been popular when the interests of profit-maximising management consultants from the business sector may become key determinants of managerialist policies (Saint-Martin, 2000, p.193).

2011, McFarlane, 2011, Moore et al., 2014). Policy transfer scholars conceptualise such agents as rational actors, since the decision makers tend to examine the causes and effects of problems (Dolowitz and Marsh, 1996).

Agents are, however, not completely rational but political, particularly in a sophisticated knowledge and policy circulation process. This is a relatively new approach compared to traditional knowledge and policy circulation concepts because policy transfer scholars start to consider the intention of actors (who supervise the policy-making process). Whilst many conventional scholars dissected knowledge and policy circulation mechanisms into several clear categories, Dolowitz and Marsh (2000) conceptualise the circulation process 'as lying along a continuum which runs from rational adoption to the direct imposition of a programme, policy or institutional arrangement on one political system by another (Figure 2-2)' (p. 13) hinged upon the opinion of actors. This evokes the necessity of consideration about other factors such as perceptions of the local context that might influence on actors' decision-making by surrounding them. In this circumstance, Dolowitz and Marsh (1996) illustrate the idea of continuum, which demonstrates the degree of voluntariness and coercion. The degree of continuum depends on the actors and agencies on which policy transfer scholars mainly focus. Governments and supra-local policy organisations are typical actors who played a crucial role in the direct coercive policy transfer process. They can force or threaten other countries or organisations to adopt a specific policy. In contrast, voluntary transfer usually happens by detecting dissatisfaction or problems. These disappointing political actions result in the circulation of knowledge and policy across the world, because politicians adopt interesting and modified practices to legitimise their political leadership (Dolowitz and Marsh, 1996). In addition to actors or agencies, a myriad of elements such as fears, national embarrassment, international consensus, global economic integration and technology also might

be push factors which could be termed indirect coercive transfer under the idea of policy transfer.

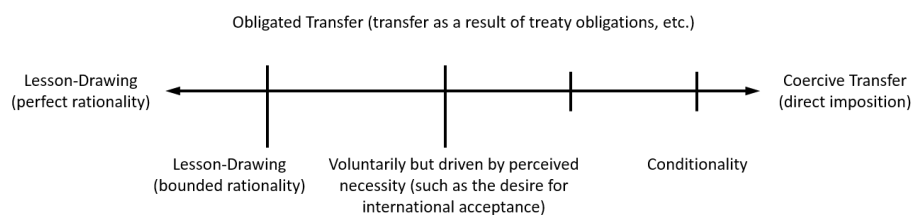


Figure 2-2 From Lesson-Drawing to Coercive Transfer (source: Dolowitz and Marsh, 2000, p.13)

Policy mobility

The world, however, consists of complicated networks and relationships surrounded by vague boundaries and changeable contexts. Thus, the complex nature of the knowledge and policy circulation process cannot be reflected accurately through the lens of traditional theories. For instance, the concept of policy transfer, developed by scholars in political science, is criticised for its lack of full attention to the socio-spatial and scalar elements of the transfer (McCann, 2011). In the policy transfer scholarships, policies are regarded as 'fully formed, off-the-shelf policies' (Peck and Theodore, 2001, p.449), which are completely delivered from A in one to B in another context by understanding transfer in abstract terms, as 'desocialised movement' (McCann, 2011, p.117). Notwithstanding, the complete transplant without any loss and conflict cannot happen in the real-world. Since policy making is often messy, there is under-emphasis on the detailed content of the policy and idea circulation process in the conventional concept (Dolowitz and Marsh, 1996). Such detail includes, *inter alia*, political context, economic resources (ibid), the increasing vagueness of actors and knowledge (Werner and Strambach, 2018), the complexity of policy programmes (Rose, 1993), institutional and structural impediments and ideological compatibility between transferring countries (Benson and Jordan, 2011). Furthermore, policy transfer scholarships tend to focus on the

national scale, and it maintains a problematic separation between the domestic and the international (McCann, 2011) in the current globalised circumstance.

This has led to a reconceptualization of the circuits of knowledge and policy as something not static (with linear causality) but rather as something which is constituted through relations and interactions (Massey, 2004) particularly in the field of social science and human geography (Sheller and Urry, 2006, Cresswell, 2010). Such relational thinking results in urban scholars considering cities as the sites of multiple flows of people, commodities, information and networks that are constantly interacting (Raco et al., 2016). Healey (2007) builds upon this by suggesting that the post-modern society is recognised as a dynamic complexity and many contingencies of urban conditions. Under neoliberalism, contemporary urban areas can be (re)produced by a network of histories, socio-political structures, social relationships, movements of labour and capital and communications with cross-scale governance, rather than a conventional place as a set of boundaries with categorised actors. Consequently, a relational thinking approach leads geographers to investigate urban issues concerning flows and networks, the dynamic over the static and interactions over objects.

In contrast to the common conceptualization of knowledge and policy circulation which only focuses on territorially, politically and socially bounded states, the policy mobilities approach emphasizes various scales of unbounded entities (as crucial circulatory infrastructure such as states or actors of states). This brings about more analyses of the knowledge and policy circulation process in relation to the transnational and trans-local constitution of institutional relations, governmental hierarchies and policy networks. Such inter-scalar conditioning of governance, through which knowledge and policy models move and in which they mutate, results in an assemblage of policy models – bundles of knowledge and techniques purposefully gathered together for particular reasons – and expertise drawn out of circulation and gathered in the local context. As policies circulate,

they usually not only change and mutate over time and through interactions, but also become coherent fixed entities through a process of assembling, disassembling and reassembling (McFarlane, 2009).

The theory of policy mobility is characterized by 'a concern for the actors, practices, and representations that affect the (re)production, adoption and travel of policies, and the best practice models across space and time' (Temenos and McCann, 2013). The primary issue for policy mobility researchers is 'how are urban policies produced in global relational contexts, transferred and reproduced from place to place and negotiated politically in various locations?' (Ward, 2011). As 'mobilities are tied to and facilitated by various moorings, organising nodes, or fixed infrastructure' (Temenos and McCann, 2013), scholars have attempted to address this question by theorising the relationships between fixity – specific sites (territoriality) – and mobility – global forces, connections, and imaginaries (relationality). This approach results from the assumption that knowledge is only actionable and productive when it is embedded or territorialised in specific social, spatial and institutional contexts even though the knowledge might be understood to flow around the world (Peck and Theodore, 2010). In other words, the idea of policy mobilities 'provides an opportunity to think about the transfer, translation, or transformation of policy models and ideas in terms of the embodied practices across, ... trans-local fields of power' (McCann, 2011).

The concept of policy mobility enables the broad interpretation of the delivery of urban regeneration. In particular, a wide range of actors within the implementation of urban regeneration through the interaction between global ideas and local context are explored. This overcomes the traditional approach of policy circulation literatures – for instance, policy transfer literature usually focused on local governments. The rise of neo-liberalism (in the context of a decentralised planning system and a more market-led approach toward urban regeneration) has translated into a series of reforms

and initiatives aimed at minimising government intervention in the planning and development process and delivering greater efficiency and simplicity for businesses (McGuirk, 2003). This means that ‘the mode of governance in the urban regeneration project describes a shift from a political elite-driven process to a business elite-driven process, which changes the power geometries and citizenship relations’ (Taşan-Kok, 2010). To encourage private actors such as artists, art associations and cultural agencies to actively participate in the project, city governments should reposition themselves as indirect supporters instead of traditional dominant power actors over civil society (Seo and Joo, 2019). In this context, the role of governments in the planning and development process has been gradually reduced and their ability to mandate desired social and environmental outcomes from projects weakened (Davison and Legacy, 2014). Moreover, ‘through the shift from public services to privatised industries, the roles, opportunities and horizons of former public sector employees’ also become travelling technocrats as newly fledged experts of privatisation (Larner and Laurie, 2010, p.224). The analysis of the embodied experiences of such engineering professionals illustrates the in-depth narratives about how national imaginaries, diverse sociologies, complicated geographies and serendipitous encounters can shape privatisation processes as well as the careers of the experts.

On the other hand, the role of private investors and hybrid organisations, so-called Public Private Partnerships, such as joint ventures and quasi-autonomous government agencies, has increased (Raco, 2018). One of the parts of Public Private Partnerships, the role of the private sector – the Global Intelligence Corps (GIC), which consists of an elite group of firms in the field of architecture, planning and engineering – is emphasised these days. GIC is a professional consultant who usually delivers high profile projects over the course of months or years (Olds, 1997). Such firms play a fundamental role in the global circulation of ideas regarding sustainable urban planning and design, because of growing

demands for their services across the world (Raco, 2018). In particular, Brill and Conte (2019) emphasised the significance of global private firms having a specific expertise of the context in which its projects are implemented. Although the very same idea (the story of King's Cross regeneration) was mobilised by similar types of global developers, successful policy mobility did not occur unless global private firms have in-depth understandings of local contexts.

There is also a lack of investigation which focuses on external stakeholders such as international organisations (eg. UNESCO in the culture-led regeneration), academia and urban policy makers in other cities. Stakeholders also do not have equal rights and powers within the urban regeneration system (Williams and Dair, 2007). Although the external stakeholders do not impact on the urban regeneration project directly, the analysis of their indirect implications on the project helps to address the delivery of urban regeneration and to understand the outcomes of it more deeply (Jung et al., 2015). Currently, policies and ideas are transferred through informational infrastructure² and elites who are thinking and acting extrospectively. In particular, in the concept of the extrospective city, McCann (2013) argues that academic attention also needs to be highlighted on the involvement of local policy actors as well as local policy makers since they proactively promote their success and share their stories through hosting study tours (Cook, 2018). For instance, Hae (2017) investigated how South Korean policies in the 1990s adopted Western style place-marketing strategies and injected them into practice as cultural revitalisation programmes of different Korean cities. This approach was led by the younger generation of urbanists and geographers, who had studied critical and contemporary versions of Western urban theories. As they were engaged in local

² McCann defines informational infrastructures as being made up of institutions, organizations and technologies that, in various ways, frame and package knowledge about best policy practices, successful cities, and cutting-edge ideas and then present that information to specific audiences (McCann, 2008).

government-subsidiary research institutes, they made progressive place marketing lead the direction of local policy.

Based on the impacts of a diverse range of actors, the scope of space where policy mobility happens has also become widened. Traditionally, both national and local government are usually examined in the circuit of policy and knowledge literature. For instance, a local government initiates the circuit of entrepreneurial policy mobility through negotiations with multiple levels of government. This happens in regular conference communications and delegation visits within which the local government disseminates successful policy models by building connections among local bureaucrats. Moreover, the transfer of the secretary of local government who had past experience in urban regeneration facilitates policy mobility in a positive way. The secretary brings successful past experiences and knowledge from different jurisdictions to new areas and helped implant them (He et al., 2018).

However, cities can be thought of as being composed of the interaction and coexistence between multiple space and times. Under the mobilities literature, the knowledge and policy circulation are regarded as a social process operating through and constitutive of social space. If the mobilisation of policy among cities is to be understood as continually enacted, performed and practised, then it is necessary to accept that the socio-spatial process of circulating policy ideas shapes and reshapes policies. This assertion draws us to the micro-spaces and more intangible spaces of knowledge production and circulation (eg. meeting rooms, hallways, cafes, bars, restaurants of conferences, the Internet and social media): 'where expertise about globally significant best practice is deployed and discussed, where lessons are learned, where trust is developed, where (actors') reputations are made or unmade' (McCann, 2011, p.118). For instance, even a journey for learning will work as a 'space of release' (Le Heron, 2007) and 'policy tourism' (Baker et al., 2016), where 'participants can think with and beyond their standard reference points and can involve specific forms of talk, work or

information gathering, but also simply being connected, maintaining a moving presence with others that holds the potential for many different convergences or divergences of physical presence' (McCann, 2011).

Discussion: navigating this research within policy mobility literatures

Through the review of key resources in previous literatures, three main issues – (1) criticisms of policy mobility research; (2) methodological points; (3) applying policy mobility in South Korea – are articulated and these will become the academic contribution of this research.

Criticisms of policy mobility research

First and foremost, since policy mobility is a comparatively comprehensive approach it helps to look at how things happen and emerge carefully. A policy mobility framework is to address complicated assemblages of multiple actors, geographies (including socio-spatial entities) and translations involved in the interaction between global ideas and local context during the delivery of an urban regeneration project. A plethora of research has reviewed diverse types of cases by exploring various levels of governance, actors and their relations within a state's broader policy process and policy priorities. For instance, the mobilisation of policies and programmes – such as urban regeneration (Brill and Conte, 2019, González, 2011, Moore et al., 2018), Eco-cities (Hult, 2015), Smart cities (Crivello, 2014, Wiig, 2015) and Business Improvement Districts (BID) (Ward, 2007, Cook, 2008, Cook, 2009) – are analysed and thoroughly discussed. Regarding the BID, Ward explores the BID model's evolution in one context, its circulation through specific infrastructures (government institutions, professional bodies, particular places) and its adoption, in modified form elsewhere.

However, the investigation of such a comprehensive approach in policy mobility regarding a developmental state³ such as South Korea is under-emphasised in mobilities literatures compared to Anglo-American cases which were well-reviewed by many researchers. Moreover, although some articles in South Korea (Sonn and Kang, 2014, Sonn et al., 2017, Shin et al., 2015) focus on the development of urban areas in South Korea and the governance system within the delivery of a development project, researchers tend to focus on cases in Seoul, the capital city of South Korea and culture-led regeneration projects. Thus, it is valuable to interrogate a thorough exploration of the Korean policy mobility model within a specific local context instead of a large global city.

Secondly, policy mobility literatures may seem to have similar overall conclusions, but the importance lies in specific details that pinpoint what enables policy mobility such as inter-relationships. For example, as far as a wider range of actors are considered in the policy mobility framework, the delivery of urban regeneration is understood and addressed far more sophisticatedly. Indeed, in the conventional knowledge and policy circulation literature, the idea of power is something embedded in specific people, places or institutions such as mayors, politicians and departmental representatives. In this circumstance, only a few specific actors who played a certain role in policy mobility were analysed. Through the lens of policy mobility however, it is believed that power could be extended outwards through networks across a flat surface; it is far more dispersed and diffused (Allen and Cochrane, 2007). This requires the investigation of a wide range of actors surrounding the mobilisation of idea and knowledge.

Methodological points

Thirdly, although the comprehensiveness of policy mobility is valuable to address the delivery of urban regeneration, it is difficult to

³ A developmental state means in this chapter that it usually has long traditions of strong bureaucratic management system through the delivery of urban policies and programmes such as South Korea and China.

articulate a simple causal relationship within the project. Because it looks at the overall interactions among factors with complicated relationships, it is hard to isolate and identify a single factor with causality in policy mobility. Furthermore, since policy mobility is not a linear and logical process but a phenomenon which just happens, it is difficult and ambivalent to conclude whether the mobilisation of ideas and policy is causally a success or failure (Ward, 2006). In this background, failure and unsuccessful stories are only rarely mentioned in policy mobility literatures even though (Dolowitz and Marsh, 2000) asserted the necessity of policy failure study in policy transfer scholarships. However, at some point, the examination of the policy failure (including resistance and contradictions toward policies) 'exceeds the narrow ascription of policy malfunction or technical ineffectiveness and provides instead an opportunity to probe a plurality of situated understandings and interpretations' (Perrons and Posocco, 2009, p.132, cited in Stein et al., 2017). By focusing on breaks, cuts, stoppages and detours, the contingencies (and particularly the contested character) of seemingly hegemonic policy patterns through the policy mobility process (Stein et al., 2017) can be investigated and emphasised.

Lastly, not only the international transferable idea but also other factors outside of the idea should be interrogated. Current research usually focuses on looking for evidence of an interesting transfer. However, other factors surrounding the idea are also important since they do hugely impact on policy mobility. For instance, as the consideration of a space with the power of actors and networks becomes significant in policy mobility research, the examination of the local context holds an important post in relevant literatures. The research might focus on questions of politics and power as territorially dependent growth coalitions engage with global circuits of policy knowledge to adopt policies that serve their interests. The translations of policies take place in diverse political systems which are characterised by different organisational cultures understood as an organisation's values and the behaviour of actors within

organisations (Schäfer, 2017). No urban policy is ever universally accepted, and any policy serves disparate interests differently or favours the interests of some over others (McCann, 2011). Research regarding the exploration of local context surrounding policy mobility reveals the micro-processes of policy circulation and ‘a more nuanced understanding of how intersubjective (often unspoken routines) influences the translation and mobilities of policies and ideas (Schäfer, 2017)’.

Additionally, either policy mobility or urban regeneration literatures use diverse types of methodology and some methodologies affect the ultimate aims of that research. Under the extreme popularity of quantifying the outcomes of policies in the South Korean research context, there are several academic works which concentrate on measuring the implications of urban regeneration. In particular, Yu and Kwon (2011) identify specific factors (critical factors for successful delivery of urban regeneration) which can be used as a guideline to examine the quality of the project. Furthermore, many studies use statistical analysis regarding economic and community impacts of brownfield regeneration both in the short term and long term (Wong and Bäing, 2012). In terms of the measurement of social sustainability, Jin et al. (2018) conducted a survey-based research and investigated diverse factors regarding neighbourhood satisfaction such as the level of participation, housing satisfaction and street cleanliness in Busan, South Korea.

In addition to quantitative methods, qualitative methods have been paid attention by policy mobility studies particularly. As such research aims to interrogate the whole story of delivering urban ideas, knowledge, programmes and projects, the qualitative approach is far more effective compared to the impacts of the quantitative approach. For instance, most researchers conduct a single case study by concentrating on the mobilisation of single programmes, policy, knowledge and project. Moreover, publicly available official discourses and documentary evidence such as government promotional statements, company marketing material, and public

biographies (curriculum vitae which are widely available online) dominate in those works of scholarship on neoliberalism. Moreover, a more ethnographic approach enables highlighting the importance of combining and comparing accessible materials with the more private stories by telling and re-telling both national and individual stories for different audiences and at different moments. This become accessible through longer term immersion in a field within which diverse experts and personal networks can be followed over time (Larner and Laurie, 2010, Robinson, 2016)

Applying policy mobility to South Korea

Although the above approaches are useful ways to understand policy mobility, it is an inappropriate approach in the Korean context due to the limitation of accessibility toward official documents. Hence, in addition to following accessible public resources, an elite interview with the snowballing approach is effectively and efficiently used with several secondary data such as local newspapers, personal documentations (which are collected by public sectors) and online resources. To avoid a common approach of the current scholarship – a single case study, a historical perspective in policy mobility (with a longitudinal approach) is required. The approach ‘highlights important historical continuities, genealogies and institutional legacies to contemporary urban policy circuits and pathways and to question what is particularly new, distinct and innovative about an intensification in the travel of urban ideas, plans and policies over the past decade’ (Harris and Moore, 2015). This increases the value of this research by focusing on three consecutive urban regeneration projects in a local city of East Asia instead of a global city such as Seoul, Tokyo and Shanghai.

The circuits of knowledge and policy frameworks are investigated to date. Although the circulation process has become a very common activity in the current era, it has been interpreted by diverse approaches. For instance, lesson-drawing defines actors, knowledge, space where the process occurs and the mechanism of the circulation process. Both policy convergence and policy transfers

categorise a few mechanisms of the circuits of knowledge and policy. Compared to previous frameworks, however, policy mobility scholars assume that policy making (including mobilising from one context and embedding in another context) is the assemblage of social dynamics. This perspective helps to understand and interpret the knowledge and policy circulation by focusing on the dynamic entities in social relations.

As stated in chapter 1, this research will interrogate the delivery of urban regeneration project in Busan, South Korea. Furthermore, the theoretical framework of policy mobility contributes to exploring the mobilisation of the international urban regeneration idea and policy. Hence, the aim of this section is to investigate more detailed academic literatures engaged widely in this research (policy mobility, urban regeneration and the Korean context) and to navigate how this research can contribute to the existing field of knowledge.

In the previous literatures regarding policy mobility and urban regeneration, the governance system with actors and their relations are significantly considered. In addition to the public sector including both central and local government, the role of diverse types of actors has been increasingly emphasised. For instance, with the introduction of neo-liberalism, the importance of privatised actors such as the intermediate agency, private developer and technocrat increases in policy mobility as well as the delivery of urban regeneration. As such a change of role depends on a mixture of multiple geographies, contexts and translations involved in policy mobility, a close reading about the local context and its surrounding circumstance should be required in this research. In particular, it is very illuminating to observe the interaction (opportunities and challenges) between a strong bureaucratic management system of South Korea and the role of various actors newly introduced in policy mobility during the implementation of urban regeneration. By articulating such governance systems and the myriad of actors, a more detailed and nuanced circumstance in policy mobility and urban regeneration will be explored. The articulated information also

reveals some core questions embedded in policy mobility: what are the subjects of knowledge and policy circulation; what are the objects of knowledge and policy circulation; where does such knowledge and policy circulation happen and to what extent is the knowledge and policy circulation supposed to contribute to the policy making process?

Furthermore, the core of policy mobility and urban regeneration literatures is in-depth analysis. However, most research in previous literatures usually focus on single case studies, which are implemented over a few years. Within this, it is difficult to make a temporal comparison of policy mobility within planning history. So, through a longitudinal approach to policy mobility, this research will examine three distinctive consecutive empirical cases (urban regeneration projects) in Busan, South Korea. By comparing individual characteristics and tendencies of policy mobility in a contextually and historically rich local city, this research contributes to academic field.

Regarding methodology issues, although it is valuable to use quantitative methods to measure the quality of urban regeneration and examine the level of sustainability, this research does not aim to do so. Instead, this research will choose qualitative methods which would allow in-depth interrogation of policy mobility which consists of a mixture of multiple actors, contexts, geographies and interpretations. The detailed methodologies of this research will be suggested in the next chapter.

Conclusion

Over the last decades, there has been a rapid increase in the circulation of public policy expertise, instruments and models (best examples and practices). Scholars endeavoured to understand the process of knowledge and policy circulation by suggesting a

terminological and conceptual diversity across different policy circumstances from lesson-drawing (Rose, 1991) to policy transfer (Dolowitz and Marsh, 1996). Generally, frameworks regarding knowledge and policy circulation focus on articulating the question of: 'what policy is exported/imported – (or transferred, learned) whatever the term is', 'how such export/import happens', 'who played an active role through the export/import' and 'where is the space for such export/import activity'. To answer these enquiries, scholars categorise types of actors (Dolowitz and Marsh, 2000; Rose, 1993) and mechanisms (Shipan and Volden, 2008; Bennett, 1991). In this circumstance, researchers believe that knowledge and policy might be a clear form of package such as the historical experience of the specific context, established programmes and institutional support. Moreover, they assume that the circulation happens under the specific mechanisms defined by many scholars (for instance, copying, emulating, hybridisation, inspiration, learning, competition and coercion).

The world, which consists of complicated networks and relationships surrounded by vague boundaries and changeable contexts, is too complex to interpret under the conventionally categorised framework. The policy mobility concept, however, is quite distinguished from other traditional knowledge and policy circulation ideas. As researchers regard the circuits of knowledge and policy process as a social interaction with dynamic entities – an interaction between territoriality (fixity, specific sites) and relationality (global forces, connections, and imaginaries) through a process of assembling, disassembling, and reassembling – the theoretical framework of policy mobility can explain such an intricate process by identifying the relationship between territoriality and relationality. Furthermore, the knowledge and policy circulation process often seems to happen among cities working under or around, rather than with or through the structures of other jurisdictions, such as provinces, national states and inter-scalar governance (Ward, 2011). This overcomes the limitation of traditional frameworks– a problematic separation

between the domestic and the international in the current globalised circumstance (McCann, 2011).

In this context, through the lens of policy mobility, the mobilisation of international urban regeneration ideas can be scrutinised much more deeply. This research will concentrate on the interaction between international ideas and intrinsic local contexts including politics, economy, society, environment and geography through a multi-scalar analysis of entities and actors (who are introduced with the advent of neo-liberalism) within global, inter-national and local levels. Due to globalisation which increased urban competitiveness, the mobilisation, adaptation and mutation of urban regeneration usually happens in a complicated and intricate network of actors from diverse levels of governance structure. Hence, multi-scalar analysis would contribute to reviewing the mobilisation within such networks in a more integrated way whilst previous research mostly focused on a single-level governance structure.

Moreover, the city of Busan has rich contexts as a meaningful local city in South Korea, so this research will contribute to broadening empirical analysis by interrogating the interaction between global policy and ideas and local context within the delivery of urban regeneration. In particular, through the investigation of three consecutive urban regeneration projects in Busan, this research will compare them and address the development and evolution of 'mobilising urbanism' in the local area across three decades.

The following chapter will discuss the way in which the theoretical framework of policy mobility will be applied to urban regeneration and provide detailed information about the research design of this thesis.

Chapter 3 Research design, Conceptual framework & Methodology

Research design

Research gap

Through an up-to-date literature review, three main research gaps were selectively found that can be addressed by this study.

Foremost, the exploration of the city of Busan would be very valuable and can be a major academic contribution as there is little research regarding policy mobility and urban regeneration within Busan and the South Korean context. Scrutinising local variables, such as legacies, pre-existing conditions and social forces, that have impacted on the circuits of international ideas will contribute to an in-depth understanding of the delivery of urban regeneration projects in Busan, South Korea. This takes the policy mobility literature into a new geographical region which will also allow for critical reflection on the policy mobility literature that has largely been applied in other contexts.

Regarding the policy mobility literature in detail, an analysis of changes over a long-term period through longitudinal studies has been underemphasised. Previous research commonly focused on the mobilisation process of a single project, exploring the way in which a project has been mobilised within a specific time point. However, the 'longer-term perspective is required to highlight important historical continuities, genealogies and institutional legacies to contemporary urban policy circuits and pathways and to question what is particularly new, distinct and innovative about an intensification in the travel of urban ideas, plans and policies over the past decade' (Harris and Moore, 2013, p.1500). Longitudinal studies enable a comparison of the previous policy mobility to the current one and allow a deduction of the significant characteristics of the circuits of knowledge and policy in the current era. Furthermore, the implementation of urban regeneration is usually a long-term process.

This means that hidden issues in the local context, which do not have a great impact on the delivery process, can have great significance over time or impact the project later. For instance, a legacy of a project may impact on urban regeneration policy making in the future. Hence, exploring the contextualisation process over time is helpful to understand the implementation of urban regeneration and the mobilisation process thoroughly (Wang et al., 2016).

Lastly, by applying the policy mobility framework to urban regeneration, a multi-level approach across global, international and local levels should be conducted within individual urban regeneration projects. Previous research usually focuses on a single level (national to national or local to local) with specific themes such as the governance system (He et al., 2018), local urban policies (Stein et al., 2017), and local actors' capacity (Brill and Conte, 2019). However, such studies could not fully address the complexity surrounding the urban regeneration project (eg. diverse types of governance systems) and policy mobility in the current era. To cover this, in addition to the local level approach, the multi-level approach can be used to contemplate the implications of international and global backgrounds (eg. politics, economy, society, environment and geography) and their relationships (Wang et al., 2016) on the delivery of local urban regeneration projects.

Research questions

This research is based on two assumptions. The first is that as the mobilisation of urban regeneration is repeated over time, the implementation of urban regeneration would ultimately become sustainable. The mobilisation process might stand for the embeddedness process of mobilising the international idea regarding urban regeneration in the local context. The second assumption is that the mobilisation process, which could also be described as the interaction between international ideas and contextual

circumstances, would evolve over time in a certain way. By exploring such assumptions, this research will reveal the way in which the tendency of policy mobility has changed and evolved and the way in which the idea of urban regeneration has been developed in city-specific political and developmental context over time.

The above assumptions mainly give rise to the two following research questions:

- To what extent has policy mobility been incorporated into an individual urban regeneration project and how has this been changed over time through three different projects?

This question seeks to identify the characteristics of policy mobility within an individual urban regeneration project. For each project, specific parts, which were focused through the mobilisation process, will be revealed. This helps to explore the evolution of policy mobility incorporated within urban regeneration over time by comparing policy mobility in the 1990s, 2000s and 2010s. Consequently, it contributes to the understanding of policy mobility and networks regarding urban regeneration in the long-term.

- What is the relative influence of local contextual factors and international mobilised ideas and policies in determining the narrative of urban regeneration in Busan and how does this change over time?

This allows for investigating the detailed information of the local context which impacts on the embeddedness process of international ideas. Diverse contextual factors (such as local politics, society, economy and environment) which create the unique local interpretations will be articulated. Through the combination of such factors, this enquiry addresses the implications of international ideas and policies on policy mobility and on the evolution of the idea of urban regeneration in the long-term.

To answer the above research questions, this research will draw on the conceptual framework of policy mobility. Moving away from the binary idea of the success or failure of policy mobility, the aim of this research is not only to discuss the effects of the mobilisation process on the implementation of an individual urban regeneration project, but also to explore the evolution process of urban regeneration after international ideas and policies are embedded in the local context. Furthermore, the characteristics of policy mobility over time will be examined. In this circumstance, the concept of policy mobility is an appropriate framework which interprets social dynamics (actors, relations, places and intermediaries) within the circuits of the urban regeneration idea. It also stands as an academic endeavour to unravel the logic of the contemporary inter-city, cross-scale circulation of policy and knowledge.

Conceptual framework

The conceptual framework in this research is twofold. First, the framework will analyse individual urban regeneration projects critically based on policy mobility. On the other hand, based on the in-depth analysis of the individual urban regeneration projects, the conceptual framework of this research also explores and summarises the evolution of the urban regeneration idea and the development of the mobilisation process in the local context comprehensively.

Analysing individual urban regeneration projects

From chapter two, there are mainly five concepts which were taken into the conceptual framework of this research: (1) knowledge circulation, (2) policy circulation, (3) space of knowledge circulation, (4) actors and relationships and (5) local context. Table 3-1 and 3-2 illustrate the five concepts of this research with an interview pro-forma. This also explains which dataset will be collected and be coded through an elite group interview.

First and foremost, the circuit of single ideas, knowledge and practices are examined. In detail, the information could be real estate promotion ideas, a green building/transportation mechanism and the implicit meaning of the wording of cities. It is likely that an ideology or narrative of an international idea must be reconstructed locally in order to negotiate socially contested notions of urban regeneration. Thus, this research will pay attention to such ideas that are produced, transferred and reproduced (negotiated politically, for instance) through the mobilisation process.

Not only single Ideas, knowledge and practices but also a complete form of well-known policies, regulations, institutions and laws regarding urban regeneration within multi-scalar geographies are also critically investigated in the policy mobility. In South Korea, the urban regeneration project is strictly supervised under architecture and urban planning policies and laws. Relevant policies and Acts impact on the mobilisation process of urban regeneration significantly. In this circumstance, the investigation of the relationship among international best examples, localised policies with planning strategies and the relevant Acts will help to understand policy mobility thoroughly.

Furthermore, socio-spatial information and structures should not be under-emphasised. The relationship and influence among actors, knowledge and space is newly emphasised (Werner and Strambach, 2018). Based on the actors' reputation, which is clearly a social construction accepted inside a specific community, the implications of the international idea and knowledge are varied. In particular, with the development of information technology, it is likely that policy mobility happens in invisible space as well as visible, conventional space. Since the social and political implications would be more effective when they interact with territorial characteristics, how the actors' reputation influences or shapes the type of ideas and knowledge that are applied in a certain setting or space will be also examined.

Moreover, a broadened scope of actors will be examined, and a new relationship of expertise (the expertise of various think tanks, consultants, gurus and mediators) will also be identified through the inter-scalar governance structure in policy mobility. With the advent of globalisation, the restructuring of the state at all levels and the reordering of linkages among state agencies, private businesses (including private policy experts), and various types of community impact on the internal character of cities and on the external linkages among cities (McCann, 2011). Thus, the role of entities within the structure of the inter-scalar governance will be both considered and analysed in detail.

Lastly, both the urban context and international circumstances should be examined within policy mobility. Travelling policy ideas and innovations can challenge established development-oriented orthodoxies when they arrive in new contexts. While ideas move, how they move, for whom, and with what effects, cannot be simply read off from the networks and the narratives provided by those transfer agents involved in moving them (McCann, 2008). In the current era of the South Korean context, the decision-making process in the implementation of a large-scale urban regeneration is usually controlled by multi-level actors. Through the elite interview, the public, private sectors, consultants and mediators who have impacted on the mobilisation process of knowledge and policy could be examined. Most importantly, to articulate the interaction between international ideas and local contexts within the mobilisation process, diverse variables such as economic, political, institutional and environmental factors should be examined. Such aspects are in direct and indirect relation with the localisation of international ideas under policy success or failure thinking (Stein et al., 2017).

Regarding international circumstances, factors impacting on the mobilisation of the urban regeneration process will be explored. The balance of state powers and global competencies (including pressures and incentives variously) enable and constrain the mobilisation of the urban regeneration idea in the local context. For

instance, when the concept of 'creative city' (Florida, 2003) became one of the most popular trends across the world, both central and city governments endeavoured to put the terminology in their report seeking to establish the creative city without consideration of their contexts. Since such unexpected trends impact particularly on the urban regeneration project, they should be contemplated (Prince, 2010).

Exploring and summarising the evolution of policy mobility embedded in urban regeneration.

The conceptual framework of this research will ultimately explore how the influences of policy mobility change on the implementation of urban regeneration over time (eg. the role of local government in globalisation and urban competition, decentralisation of governance and the new rise of the role among private firms). As the main aim of this research, the evolution of urban regeneration shows the characteristics of localised urban regeneration during a specific period. Moreover, the change of mobilisation process can describe which factors are emphasised or under-emphasised through the circulation of the urban regeneration process. Finally, the relationship between policy mobility and the idea of urban regeneration over time will be articulated closely.

Theoretical framework	Key concepts	Collecting information	Relevant questions
Policy mobility	Knowledge circulation	Real estate promotion ideas	What is the main strategy of international developers when they try to sell a land or property?
		Green building mechanism (hinged upon green building certification) or green transportation system.	What technical practices regarding 'green building' or 'green transportation' facilitate policy mobility? What is the relevant law or policies in another context that are strongly related to 'green building' or 'green transportation' ideas?
		Best practices for green buildings / infrastructure	
		Specific (hidden) wording and image in city mottos and slogans (eg. Dynamic city)	What legacies and mediators facilitate the circulation of policy models? Is it compatible with a case study in Busan, South Korea?
	Policy circulation	Well-known policies regarding economic-based urban regeneration (eg. New-deal projects for urban regeneration)	How do mobile policies (with regard to sustainability) within urban regeneration impact the character and politics of the rest of the urban area and the following redevelopment projects?
		Local government's strategic planning	How do policies regarding a strategic urban planning mutate as they travel?
		Incentives (official government support) for encouraging environmental development	What are the consequences for the urban redevelopment through which the environmental policies are moved?
	Space of knowledge circulation	Conference & public hearing / field trip / mega-event / social media	How does the mobilization occur through site visits and field trips? What situations (eg. sites of persuasion) do policies travel through?
	Key actors & Relationship	The role of public sectors / private sectors / organisations such as think tanks / consultants / gurus / mediators in the individual project's planning process	Who mobilizes policy? What relationship has facilitated or hampered the policy mobility process? Who has a critical role to interact between local politics and international ideas?
		The role of local government as an examiner of the regeneration process	
		Official events for public participation in the individual project's planning process	

Table 3-1 Key concepts emerging from the theoretical framework (policy mobility) with interview pro-forma (1/2) (source: author)

Policy mobility	Local context	Local governance system / specific politics issues in terms of energy (eg. Nuclear power phase-out)	What do you think of the differentiated local context within imported policies or programmes? What are the consequences regarding sustainable regeneration for the local areas through which the policies are circulated (the interaction between local context and international idea occurs)?
		Employment rate in Busan / population in Busan / household income / the number of public transportation users Estimated economic impact on the change of derelict area into revitalised area	What are the implications of local employment rate / population in Busan on the adoption of international policies?
	Institutional aspect	Local civil servants' recognition of the sustainable development	What is the prior aim of sustainable development in the Korean context? What are the incentives that have impacted on the investors' decision-making process, particularly concerning the environment directly?
		Specific (hidden) wording regarding 'sustainability' in the planning documentations published by local government	
		Eco-unfriendly promotions / incentives for inducing private investment in the flagship development projects	
	Political aspect	The impact of local and national regulations on the development projects	How do the local politics interact with the international ideas as they travel? To what extent has devolution impacted on the redevelopment project? Are there any specific community activities which have impacted on the adoption of international ideas? To what extent has public participation been considered during the policy making process?
		The process/outcomes of local autonomy system since 1994	
		The relationship between political party and specific sustainability politics	
		Community activities which encourage active public participation	
		The role of local inhabitants regarding the environmental decision-making process in the projects	

Table 3-2 Key concepts emerging from the theoretical framework (policy mobility) with interview pro-forma (2/2) (source: author)

Case Study Methodology

The aim of this thesis is to explore policy mobility within the urban regeneration project and how it evolves and changes over time. To achieve this aim, this thesis will use a case study approach. A case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within the real-world context, especially when the boundaries between the phenomenon and the context may not be clear. This allows for multiple facets of the phenomenon to be revealed and understood (Yin, 2009, Baxter and Jack, 2008). The case study research commonly has been used under several circumstances: when it concentrates on answering 'how' and 'why' questions, when researchers cannot manipulate the behaviour of elements involved in the case study, when the research should cover contextual conditions, or when the boundaries are not clear between the phenomenon and the context (Yin, 2009). Based on a case study approach, this research will utilise qualitative methodology and based on qualitative research, an intensive analysis and descriptions of a case study will be conducted. A researcher identifies the topic or question of interest, collects information from a variety of sources such as elite interview, observations and review of existing documents and accepts the analysis as one of discovering answers from such information as a result of this study. The qualitative approach interprets collected data and deduces relevant answers to the research questions through the data analysis process. The following part will describe three empirical case studies, data which could be collected through fieldwork and two main analyses using collected data.

Framing on empirical case study: Busan, South Korea

This research assumes that policy mobility within urban regeneration has been developed and evolved by city-specific political and development processes over time: (1) as the mobilisation of urban

regeneration is repeated over time, the implementation of urban regeneration would ultimately become sustainable and (2) such a mobilisation process would evolve over time in a certain way. To probe these two assumptions, this study will conceptualise the policy mobility framework in three consecutive empirical case studies from the 1990s to 2010s (Table 3-3) in Busan, South Korea. In this type of research, the investigation of the local context is a significant issue because it has an impact on the mobilisation process. This means that if the local contexts are different with three empirical case studies, all of them should be scrutinised separately. However, by exploring three consecutive urban regeneration projects in a single local context, this study narrows down the scope of investigation regarding the urban context. It will be able to reflect deeply on the long-term adaptation process within the mobilisation of urban regeneration in the local area (Figure 3-1). In other words, this thesis enables the interpretation of the evolution of policy mobility and its implications on three urban regeneration projects over time by maintaining the consistency of the local context. Brief information of three consecutive urban regeneration projects will be discussed below.

	Urban regeneration projects		
Project	Centum City	North Port	Eco-delta City
Period	1990s	2000s	2010s
Previously	Airport and container yard	Main port (harbour)	Farmland
Location	Busan, South Korea		
Concept	Sustainable Urban Regeneration	Waterfront development for citizen	Smart city

Table 3-3 Three consecutive urban regeneration projects in Busan (source: author)

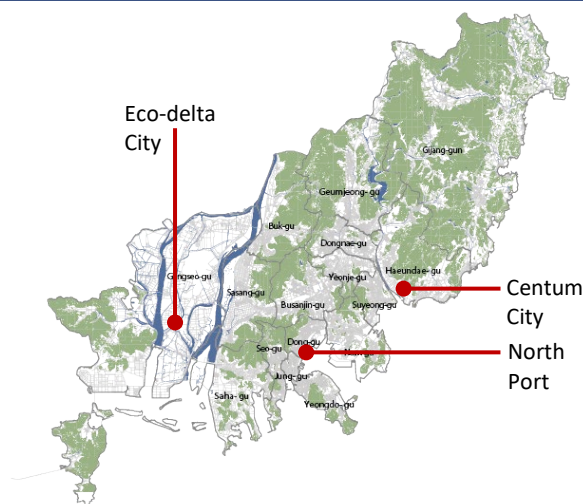


Figure 3-1 Location of three consecutive urban regeneration projects
(source: Busan Development Institute, 2015; revised by author)

Centum City

Since the middle of the 1990s, Busan Metropolitan City has nominated and invested in tourism and culture as future strategic industries to promote its regional economic performance. With the advent of the information-oriented and internationalised era, the city government especially tried to create a worldwide high-tech urban industrial complex. The plan for this high-tech urban industrial complex was to include information, business, tourism, commerce, residence and entertainment compounds and facility development on an empty area in the city—almost 1.17 million square metres—which was used as an inner-city military airport in Hae-un-dae province. This 712 billion Korean Won (£471 million) project has been implemented since 1994, with the aim of reorganising Busan's main industrial structure from manufacturing industry to digital industry. The project has been called 'the Centum City Development Project'.

North Port redevelopment

Due to the construction of the Busan New Port, North Port which previously acted as the main port of the city needed to be redeveloped. Busan Metropolitan City government tried to

recreate the port as the international marine tourism hub of Busan from 2008. The project has spent 87.3 trillion Korean Won (£57.76 billion) to date (£15.57 billion for infrastructure, £42.18 billion for facilities construction – commerce, business, prismatic composition). Civil servants imagined the area could provide local inhabitants with newly developed waterfront areas. The area where the port is being redeveloped has great potential as it will be encompassed within a commercial district, according to Busan City's urban plans for the year 2020 and is also adjacent to previous urban centres (which are famous as commercial zones in Busan) such as Nampo-dong, Gwangbok-dong, Jagalchi and the 2nd Lotte World skyscraper currently under construction. With the high expectations of Busan residents, political and social attention are being centred on the project, which is expected to contribute to the revitalization of the local economy.

Eco-delta city (Smart city)

Busan city government started the smart city programme under the name of U-City (ubiquitous city) in 2005 to attract next generation technology into the city's major infrastructure, encompassing port transportation, tourism and convention sectors. In the second phase which began in 2012, the Metropolitan City government planned to develop and implement 31 ubiquitous urban services. However, due to both the national and local governments' decision, the four-year project was provisionally cancelled. However, in 2017, a new smart city project managed by the Korea Water Resources Corporation (a governmental agency) named the Eco-delta city project, was implemented. Based on a European virtual city, the redevelopment project aims to create an international water-friendly culture city, developing a future-oriented industrial and logistics network in the west area of Busan, near the city airport. The project will be mixed-use development including residential, commercial, international business, and high-tech industrial

areas. As of 2019, the construction of the urban infrastructure was fully completed.

Consequently, based on these three projects (Centum City, North Port redevelopment and Eco-delta city), this research will seek to explore how the mobilisation process was conducted and the way in which it has evolved through the interaction between local context and international ideas over time. Furthermore, this study will summarise the development of the urban regeneration idea over time. As a result, the change in the tendency of the local policy-making process regarding urban regeneration through policy mobility will be revealed.

Data collection

Documents & Newspapers

For the primary research task, the author of this thesis endeavoured to collect official documentations regarding urban regeneration plans of the individual project archived in the Busan Metropolitan City hall, Busan Development Institute, Busan Port Authority, and Korea Water Resources Corporation. The pivotal work in data collection is to explore major issues within the delivery of individual urban regeneration projects. As the official documentations elaborate core policies, programmes, concepts of the project officially, it is the formal and easiest approach to explore the implementation of urban regeneration.

For secondary material, the research will utilise two local newspapers, news magazines, newsletters and websites published by the above organisations (Table 3-4). Compared to official documentations, such materials will provide local circumstances, specific opportunities and challenges and detailed information in terms of the implementation of urban regeneration. It will also examine the data collected by the city, and how they were operationalised and formulated in the individual project's documents. As the primary research task can set up the frame for this research,

the secondary material can flesh out the frame with greater detail. Moreover, by comparing the very same information published by a different publisher, specific information could be automatically verified as truth or falsehood.

Type	Name	Author
Archives	Busan Metropolitan City's supplementary planning guidance on planning practice	Busan Metropolitan City
	Environmental Policy in South Korea – Problems and Perspectives	Konrad A. S.
	White book: The Development of Centum City	Busan Metropolitan City
	White book: The North Port Development	Busan Port Authority
Newspapers (local)	Busan Ilbo	
	The Kookje Daily News	
Newsletters & Websites	www.busan.go.kr	Busan Metropolitan City
	www.bdi.re.kr	Busan Development Institute
	www.busanpa.com	Busan Port Authority
	www.kwater.or.kr	Korea Water Resources Co.
News Magazines	Dynamic Busan	Busan Metropolitan City

Table 3-4 List of documents (source: author)

Semi-structured interviews

The interviews were aimed at mapping the strategic policy making process regarding urban regeneration and its relation to the adaptation of global policy ideas. Hence, this research will conduct an elite interview with civil servants, educators in the educational institutions, researchers in a government-funded research institute and foreign professionals related to the international project. Regarding elite interviews, snow-ball sampling is used since it is somewhat difficult to recruit essential interviewees. Each participant is asked to suggest or invite further cases. As participants have been tightly networked through the delivery of the urban regeneration project in Busan, it is useful to achieve valuable and fruitful resources for this research. The interview schedule was determined by the above research framework (conceptual framework) – interviews which were expected to answer core questions were organised in the

early stage – and the interviewee's schedule. Moreover, snowball sampling determined who and how many were interviewed.

The research interview was divided into two periods: a pilot study from December 2017 to January 2018 and the main data collection from March 2018 to June 2018. The first interview was in the pilot study, December 2018 and the first interviewee was a civil engineering professor, who had responsibility for the development of urban infrastructure in Centum City. After the interview, he recommended a couple of core participants for the development process and provided personal contacts for interview. Through a couple of months of the pilot study, information from 14 interviewees was collected. Based on this experience, the second elite interview was more strategically planned through a closed network such as a group of civil servants and academia. Only a few interviews with private developers and master planners were organised by personal contact through email. In this context, various essential and useful pieces of information from 30 interviewees were collected within three months (44 interviewees in total).

Category	Project	Description	Interviewed
Civil servant (Local)	Centum City	Busan Metropolitan City	2
	The North Port		2
	U-city		1
	Eco-delta City		1
	Local planning		2
Public corporation	The North Port	Busan Port Authority	2
	Eco-delta City	Korea Water Resources Co.	3
Civil servant (Central)	Centum City	Ministry of the Interior and Safety	1
	U-city		
-	Centum City	Retired	3
Educational institutions	Centum City	Universities	3
	The North Port		1
	U-city		1
	Eco-delta City		3
	Local planning		11
Research Institute	Local planning	Busan Development Institute	3
Architecture & Planning firms	Centum City	Private firms	2
	The North Port		
Foreign professionals	Minato Mirai 21	Minato Mirai 21 Corporation	3
Total			44

Table 3-5 Interviewee group (source: author)

The interviewees are from central government, local government, public corporations, educational institutions, research institutes and architecture and planning firms (Table 3-5). Regarding the local civil servant group and educational institutions group, there are two types of experts: both national and city level interviewees involved in city management and interviewees concerned with individual projects. Interviews with the former group will explore the mobilisation process of urban policy regarding urban regeneration in the local area whilst those with the latter group will address individual efforts in the urban regeneration projects. The other interview group could also address specific circumstances and political tensions which arose during the delivery of the urban regeneration projects. A sample of the interview questions and the ethical acceptance statement will be added in the appendices.

Treatment of the interviews

To provide the context of who the interviewees are, and to identify the extent to which they have impacted on the urban regeneration project, this research will reference the quotes of interviewees by using their positions and roles with their engaged institutes through the urban regeneration project (Figure 3-2). Regarding the interviewee's name, the original name of the interviewee was cited for some interviewees who were willing to identify their name and positions. Otherwise, a vague description of employment is used for identification to express the significant implications of the interviewee in the delivery of urban regeneration projects.

interview with a senior manager from Busan Metropolitan City, Year
 interview with a civil servant from PCFIR, Year
 interview with a local architect, Year

Figure 3-2 Reference style (source: author)

Data analysis

Thematic analysis

Thematic analysis is a method for identifying, analysing and reporting patterns within data. It minimally organises and describes the data set in detail. It also interprets various aspects of the research topic through coding the material (Boyatzis, 1998, cited in Braun and Clarke, 2006). At this point, it is important to acknowledge this study's theoretical position and values in relation to qualitative research. Thematic analysis will be conducted through an analysing software 'NVivo'. Through the computer software, specific codes (detailed information within diverse types of documentation) will be highlighted and sorted from collected data. The thematic analysis has the purpose of synthesizing the textual information to assist in the in-depth understanding of the results.

One of the most prevalent approaches of thematic analysis is to search out underlying themes in the materials being analysed (Bryman, 2016, p557). Through the coding phase, the analysis extracts specific themes illustrated with brief quotations from newspaper articles, magazine and newsletters and websites. In this research, the codes are usually based on the conceptual framework and divided into two groups: circulation of ideas and local context. Regarding the circulation of ideas, for instance, key actors and their relationships, knowledge and ideas that were circulated from the international resources during the delivery of urban regeneration were highlighted. Indeed, a clear form of specific policies, programmes, institutions, regulations and Acts were also double-checked throughout the whole collected dataset. When it comes to the local context, hot issues regarding the delivery of urban regeneration were collected such as political issues, environmental issues, community issues and economic issues. According to the specific time and space, such issues worked as opportunities and challenges during the implementation of urban regeneration.

Based on these codes, abundant useful materials were organised into a story of urban regeneration in Busan, South Korea. This is

particularly important in the case of Centum City. Since it was implemented around two decades ago, there are no existing official documentations. Data collection regarding Centum City would depend on unofficial documentations and the interviewees' transcript which usually include symbolic expressions with implicit meanings. Thematic analysis is very helpful to address such implicit meanings effectively by 'revising the themes or categories that are distilled from the examination of documents (Bryman, 2016, p.559)'.

Narrative analysis

This research will investigate three consecutive urban regeneration projects over time. The narrative analysis contributes to capturing how policy mobility within the three consecutive projects have changed chronologically. The three urban regeneration projects were thoroughly documented, and it enabled this research to explore how the narratives evolved and impacted on the delivery of urban regeneration and the local context over 30 years. The narrative analyses start from the investigation of ideographs in documents and interview resources. The context of an ideograph is able to reveal the way in which the narrative changes over time. For instance, the actor (or policy, knowledge, etc.) in urban regeneration was the primary ideograph and received various interpretations in the three consecutive urban regeneration projects. Since the ideograph of actors plays an essential role in the implementation of urban regeneration, it would be a dominating narrative.

Furthermore, storytelling is a principal way of constructing shared meanings, providing a plot that helps to articulate policy mobility (Jokinen et al., 2018) within the implementation of urban regeneration. Storyline is a useful analytic concept to address the complexity of policy mobility. In the mobilisation process, a storyline is a tool through which actors from different contexts and interests can relate to another context. This is why the narrative analysis focuses on identifying different storylines under the grand narrative of

urban regeneration. This research will describe the way in which the ideograph of actors (or policy, knowledge, etc.) developed and defined the main narrative during the urban regeneration project in Busan. In turn, it focuses on the culmination of the policy mobility process under the grand narrative of urban regeneration.

Ethical concerns

Before the beginning of data collection, the ethics application was officially approved by University College London Research Ethics Committee (Ethics Application 12281/001).

Throughout the research process, there were no concerning issues regarding research ethics. Regarding elite interviews, most data are collected by those who had impact on the policy making process such as civil servants, educators in the educational institutions, researchers in government-funded research institutes and foreign professionals related to international projects. The interviews aimed at mapping the strategic policy making process regarding urban regeneration and its relation to the adaptation of global policy ideas. There were no issues obtaining consent from interviewees and confidentiality was secured throughout the entire process of the research, starting from recruitment to the write-up of the thesis. There was no physical or mental harm reported or observed during research and no participants withdrew from the study. Furthermore, government documentations, newspapers and books are fully open to all readers. Hence, there were no special challenges regarding ethical issues during the entire term of this research.

The author was also aware of potential ethical issues that may arise and was prepared to manage such issues. For instance, if an interviewee told the author of a criminal activity by someone else, the interview would be terminated at once and the author would notify him/her about the appropriate steps that would be taken in response (the removal of relative interviews already conducted and the notification of the withdrawal of such interviews).

Challenges during data collection and analysis

During the data collection process, several challenges should be addressed. Foremost, it might be difficult to access official government data regarding old urban regeneration projects. In South Korea, official government documents should be removed five years after publication. Regarding Centum City, the project was completed around 15 years ago, and due to the difficulty of collecting data through official documentations, it would be relatively more focused on interviews with interviewees who were responsible for the regeneration project at that time rather than on such official government resources. To secure old government archives, copies of official documentations owned by interviewees were used. For instance, regarding Centum City, a civil servant who played a central role in the implementation of the project still possessed official documentations which recorded a number of major issues about Centum City which was very useful in exploring the overall delivery of the project in detail.

Moreover, in the South Korean context, civil servants tend to avoid requests for an interview. Under the very conventional bureaucratic system, civil servants do not want to take responsibility for what they do. In particular, if there is a possibility of a critical perspective regarding a large-scale urban regeneration project which received large government funds, civil servants tend to avoid commenting on the project. This is one of the greatest challenges during the pilot data collection period of this research. Furthermore, to cover the lack of civil servants' interviews, more interviews with academia and urban planners in private firms were conducted. To make interview appointments, the relationships between academia (particularly those engaged in the delivery of the urban regeneration project in Busan) and experts in the private sector were proactively used.

Lastly, compared to official government publications in Western society, the documentations of the Korean government are inclined

to be full of vague and ambiguous words. The publications in the South Korean government usually adapt many global trendy expressions (such as sustainability, creative, smart and the fourth industrial revolution) even though the writers do not clearly define what the words mean. In this context, to address and interpret them clearly, close reading and consideration should be required based on elite interviews (particularly interviews of the elite who had an impact on the policy making process). To choose meaningful and important words and expressions within official documentations, words which could be found repeatedly from interviews were used. Words that were repeated by interviewees were also believed to be described importantly in documentations. Detailed practical action plans, in addition to planning policy guidebooks or government's announcement, were also mainly analysed.

Conclusion

The aim of this research is to understand urban regeneration in the local area through the theoretical framework of policy mobility. In detail, research gaps lead this study to examine how narratives concerning urban regeneration and policy mobility have been implemented and developed over time. By using qualitative methodology, this research will collect data from government reports, government archives, policy documentation, elite interviews and relevant statistics. Furthermore, such resources will be scrutinised by thematic and narrative analysis.

This research will contribute to the academic field in a few ways. First, the exploration of a unique local context in an empirical case study will enrich the understanding of urban regeneration in policy mobility scholarship. As urban stories not in a global city but in a local city are more addressed and interpreted, a unique local characteristic can be banked for further study. This contributes to a more precise comparison regarding policy mobility in the implementation of urban

regeneration between cities in very different contexts, such as cities in Western countries and those in Asian countries.

Secondly, this study will reveal the characteristics of policy mobility in the current era within a specific context of Busan, South Korea. By comparing policy mobility in local planning history, this research will explore the evolution of policy mobility within the same local context over time. Policy mobility is understood as a type of assemblage network, 'the coming together of the previously unrelated, a constellation of processes' (Massey, 2004). It means that the main factors that play a significant role within the networks of the mobilisation process could be changed over time and space. Since three empirical case studies were implemented in the same location, this research can concentrate on the evolution, development and change of such factors without additional effort which would be needed to investigate differences of local context unless three urban regeneration projects are implemented in the same local context.

Lastly, the multi-level approach which encompasses global, international and local levels, one of the strengths of the theoretical framework of policy mobility based on relation theory, helps to address policy mobility within the implementation of urban regeneration. Due to globalisation, the process of knowledge and policy circulation has become more developed and complicated in the current era compared to the process in the past. In this circumstance, there are limitations to interpreting the process through the traditional knowledge and policy circulation framework. The relational approach will contribute to a clearer understanding of policy mobility particularly during the delivery of an urban regeneration project.

Chapter 4 Context: Busan, South Korea

This chapter aims to elucidate the context of South Korea and Busan before the beginning of this research. It will narrow down the scope of the context which this research will have to investigate within empirical chapters. The following section will be dissected into four parts: general information of South Korea and Busan; urban issues in South Korea and Busan; spatial planning: from national to local level and urban regeneration: a different perspective within traditional urban planning. The last section will summarise and conclude the above aspects for the next step.

General information of South Korea and Busan

Geography & Brief history before the Korean War

The city of Busan encompasses a wide range of rivers bordering along mountains (Figure 4-1). The Nakdong River, the longest river in South Korea, flows from the west side of Busan to the Korea Strait whilst the Nakdong River Delta⁴ (spot 1) is surrounded by the Nakdong River. The Geumjeong mountain, the highest mountain in the city, is located in the north. The urban area was initially created from the old port and its adjacent area⁵ (spot 2) and it became the first urban centre in Busan. The urban centre has declined since 1998 because of the movement of city hall. As the city hall moved into the geographically central area of Busan, a new urban centre was rapidly formed (spot3). The establishment of a large number of department stores accelerated such a development of another urban centre. Since the 1990s, the city government of Busan began to develop the east side of Busan. Based on strategic planning by the local government, the newly developed area⁶ (spot 4) became one of the most famous places in Busan as the most developed urban centre which consisted of various types of expensive mixed-use and residential properties. For now, the image of this area usually

⁴ The location of the Eco-delta City project

⁵ The location of the North Port project

⁶ The location of the Centum City project

represents the city of Busan. In total, the city covers about 770.04 km² and the population is around 3.5 million in 2020 (Busan Metropolitan City, 2020).

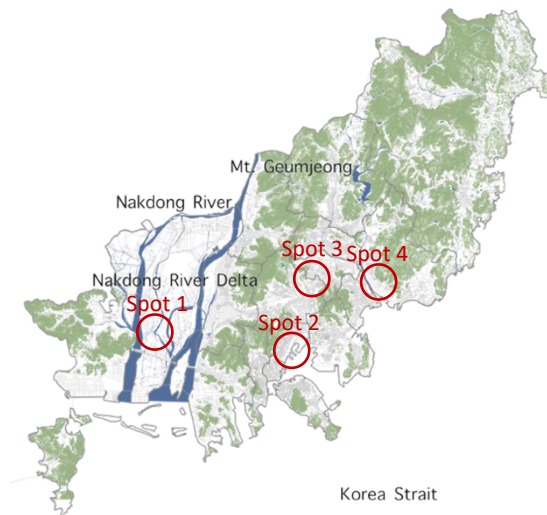


Figure 4-1 Busan Metropolitan City (source: BDI, 2016; revised by author)

Historically, the development of a city is usually impacted by the location of the city. Likewise, the city of Busan⁷ also became the first harbour city and the second largest city in South Korea since it is located on the south east coast of the Korean Peninsula (Figure 4-2). Busan is the nearest city in South Korea to Japan. The distance from the city of Busan to Tsushima Island, Japan, is only about 49.5 km, whilst the distance from Busan to Fukuoka, the mainland of Japan, is about 180 km. Meanwhile, Seoul, the capital city of South Korea is further away from the city of Busan compared to Japanese cities, approximately 314 km. Due to the close distance from Japan, Busan has been impacted considerably by Japan historically. Busan was formed as a tiny harbour village during the Japanese colonial era since 1876 when Japan forced Korea to enter into a commercial treaty which humiliated the Koreans. As the nearest area to Japan in South Korea, the town of Busan was the centre of trade between

⁷ Busan (the Revised Romanization of the city's Korean) officially replaced Pusan, the earlier McCune-Reischauer romanization in 2000.

Korea and Japan. Thereby, Busan was technically the first international port and it became inevitably the first harbour city in South Korea. Under the Japanese rule, the town of Busan was modernised much earlier than the other areas in South Korea. For instance, due to the establishment of the Japanese settlement near the port of Busan, a steam tramway for residents, which was a popular transportation system at that time in Japan, was introduced and adopted in 1915 (The Academy of Korean Studies, 2014). It was the first city in South Korea which had a modernised transportation system.



Figure 4-2 Location of Busan Metropolitan City (Source: author)

During the Korean War⁸ from 1950 to 1953, most areas in South Korea were absolutely devastated. However, Busan was one of two cities (Figure 4-3) that were not invaded by the North Korean army. In 1950, UN troops landed on the city of Busan and surrounded the city to protect South Koreans from communists by defeating the North Korean army and other allied communists. The city was designated as the provisional capital of South Korea for almost the entire length of the Korean War (Lankov Andrei, 2010). It became a

⁸ The Korean War occurred when the Korean government was made into Republic of Korea and Democratic People's Republic of Korea because of political ideology after Pacific War and World War 2.

self-governing city under the contingency plan so that major decisions regarding national defence, diplomacy, and politics were made during the war time (Kim et al., 2018).



Figure 4-3 Korean War, June–August 1950 (source: Encyclopædia Britannica)

Most Koreans across the country (including the area of South and North Korea) moved into the city of Busan for safety. The pre-war population of Busan was around 882,000 whilst the population of refugees in early 1951 was approximately 500,000 (Lankov Andrei, 2010). After the cessation of the Korean War, refugees realized that they could not return home and lost all they had before the war. The only thing they could do was to settle down in Busan and create a family with a new life (Cha, 2012). Since this difficult time, people have shared a strong identity and characteristic as citizens of Busan. People living in the city of Busan developed local solidarity, based on pride of surviving through difficult times together by helping each other out. They also had strong loyalty toward the city of Busan

whether the area was their original hometown or not, as it was the place which gave them the opportunities to build their lives again. Citizens of Busan usually express this sense of closeness through the local dialect: 'We're not strangers!'. Based on this strong identity, South Korea as well as the city of Busan have developed unprecedentedly over the last 70 years.

After the Korean War: Evolution of the status of South Korea in the global context

After the Korean War, the world regarded South Korea as one of the poorest countries in the world. The United States (the U.S.), the United Nations, and many other countries endeavoured to assist South Korea to be revitalised physically and economically. Between 1945 and 1960, South Korea was aided by approximately \$2.94 billion U.S. dollars in total. Above all, support from the U.S. accounted for over 80% (National Geography Information Institute, 2017a). However, South Korea was not developed and industrialised until the 1960s, since the country was too dependent on foreign aid. In the 1950s, the South Korean government had to follow the U.S. instruction for the rebuilding of South Korea through diverse approaches. Foremost, the U.S. constructed the major urban infrastructure such as power plants, telecommunication facilities, public transportation system, educational institutions and health facilities. Moreover, commodities including wheat, oil, fertiliser and medicine were also supplied through the U.S. military base. Furthermore, South Koreans were given a type of technical consulting and training for government-led industries (Savada and Shaw, 1992).

Based on support from across the world, from the 1960s, Chung-hee Park, the former president of South Korea, instructed civil servants to concentrate on national economic development through a five-year economic development plan. In detail, he propelled the national government to conduct export-led policies and to focus on heavy and

chemical industries. During this period, South Korea was significantly developed and industrialised. The city of Busan also experienced rapid industrialisation between the 1960s and the 1970s, focusing on labour-intensive industries such as shipping and manufacturing industries (Savada and Shaw, 1992). In particular, employers who made simple products such as textures and shoes led the growth of the manufacturing industry in Busan by using cheap labour based on a number of refugees. Although there have been secondary urban issues⁹ since the 1980s caused by such rapid development, the revival of South Korea brought about the change of national status.

A recipient of global donation after the Korean War itself became a donor which offers aid to developing countries across the world. This is the unique case in the world so that people termed such an incredible development of South Korea as ‘the Miracle on the Han River’. Until the early 1960s, there were only 16 countries with diplomatic ties to South Korea. Due to the United Nations’ recommendation, the country built more than 60 practical and cooperative relationships with a number of developing countries, particularly in Asia. However, the unprecedented development of South Korea led the country to expand the number of diplomatic relations to over 50 by the 1980s. Since the 1990s, the end of the Cold War encouraged South Korea to establish diplomatic relations with Eastern European Countries. Currently, South Korea maintains diplomatic relations with 188 of the 191 United Nations member countries and it plays an essential role on the global stage, particularly regarding peacekeeping, human rights, economic development and environmental protection (National Geography Information Institute, 2017a). Based on a huge improvement in national status, South Korea is able to build successful bilateral or regional Free Trade Agreements (FTAs). This strongly supported the existing multinational trading system within which unfair business

⁹ This will be discussed in detail below.

deals, which take advantage of the asymmetrical national strength, happened.

The export-led policy has still impacted on South Korean society for now, particularly in the government policy framework. The successful urban development cases in South Korea gave civil servants confidence to export a type of successful city model as the best practice or case study. When South Korea was one of the poorest countries in the world, government officers and politicians attempted to follow world leading countries' urban policies, laws, and programmes such as United States and Japan. However, when the national government overcame such challenging periods and achieved the reputation of being a successfully developed country, the central government planned to export its experience and delivery process to other countries. For instance, the idea and politics of 'Saemaul undong,' which represents a community-led movement to improve rural communities in the 1970s, was exported to South Asian undeveloped countries (Sonn and Gimm, 2013). This tendency has been repeated so far. In the 1990s, the South Korean government endeavoured to learn effective methods and approaches (the successful delivery of a large-scale of urban regeneration) from other contexts to overcome demanding urban issues. However, in the 2010s, based on some of the successful urban regeneration projects, the national government proactively tried to share the experience, knowledge and implementation process regarding projects.

South Korea is a country where citizens have unique ethnicity such as strong identity, self-esteem, unification and a spirit of sacrifice, which played a critical role in diverse types of historical crises. In particular, Busan is a special city in South Korea. Although it is not a global city and not very popular across the world, it is a symbolic city which is able to epitomise the traditional urban context of South Korea based on its unique history, story and relatively conserved physical conditions. There is no city in South Korea which includes

both the modern and present context together except for the city of Busan. Moreover, as the global reputation, technology and power of the city of Busan emerged, this tended to influence other countries and societies significantly. Hence, the city of Busan could be an indicator or a typical example of South Korea regarding urban issues in addition to the capital city, Seoul.

Thus, it is a meaningful to explore the development of Busan by focusing on urban regeneration projects: the way in which the city of Busan has been developed; to what extent urban regeneration projects have impacted on the development of Busan; and to what extent the mobilising and sharing idea and policy has been engaged in such urban regeneration projects. All these inquiries will be analysed through the theoretical framework of policy mobility in the empirical chapters. Before that, a more detailed urban context surrounding the city of Busan and South Korea will be discussed in the following sections.

Urban issues in South Korea and Busan

As has been discussed, South Korea has developed dramatically over the last 70 years after the Korean War. During the rapid development, however, urban issues in diverse fields increasingly affected urban space. The national and local government tended to resolve such issues through a type of intervention, urban planning strategies with the idea of urban regeneration. To understand urban planning policies and urban regeneration applications in South Korean context, it would be necessary to investigate urban issues in South Korea by subject in advance. So, this section will be dissected into four parts: (1) government & local autonomy: forming the local as well as the country; (2) economy & industry: rapid economic development and crises; (3) transportation & urbanisation: expansion of urban area; and (4) populations: necessity for urban planning.

Government & Local autonomy: Forming the local as well as the country

Government

Foremost, forming the national and local government is one of the significant themes which influence the field of urban planning in South Korea. After the establishment of the South Korean government¹⁰ in 1945, the government has been typically categorised from the First Republic to the contemporary Sixth Republic by the government system (Table 4-1). Before the beginning of the Sixth Republic in 1988, the history of the Korean government was a long-term battle of autocracy versus democracy. Autocracy by military government was usually dominant over the 40 years between the First Republic and the Fifth Republic. In the First Republic, the national government of the Republic of Korea (South Korea) was officially established based on the Government Organisation Act in 1948 (National Geography Information Institute, 2017a). The national government started from 11 executive ministries and four nonexecutive ministries (Table 4-2) even though the structure of the South Korean government was changed several times by the administration over seven decades. Furthermore, in this period, the Constitution which was a backbone of liberal democracy was announced as a constitutional country.

The First Republic ended once the former president Syngman Rhee stepped down. Citizens demanded his resignation because of his autocracy and ambition for a long-term seizure of power. To avoid such a situation, the Second Republic amended the Constitution from a presidential system to a cabinet system. However, this only lasted less than a year and the presidential system was adopted again through a military coup by Major General Chung-hee Park. He finally became the president of South Korea from the Third Republic. In this period, South Korea achieved a dramatic economic

¹⁰ Provisional Government of the Republic of Korea

development. Although the process toward the development has become a political controversy in the current era, it is partly true that the military authority's powerful drive through a five-year economic development plan contributed to industrialisation and urbanisation.

Government	Period	president	Major issues	Aims in urban planning
Provisional Government of the Republic of Korea	1945–1948	-		
First Republic	1948–1960	Syngman Rhee	- Establishment of Constitution	- Reconstruction after the war
Second Republic	1960–1961	Posun Yun ¹¹	- Parliamentary (cabinet) government - Bicameral legislature	
Military Government	1961–1963	Posun Yun ¹²	- Indirect presidential election	
Third Republic	1963–1972	Chung-hee Park	- Direct presidential election - Unicameral legislature	- Economic development
Fourth Republic	1972–1979	Chung-hee Park	- Closing National Assembly - Autocratic government	- Economic development
Fifth Republic	1979–1980	Kyu-hah Choi	- Indirect presidential election	
	1980–1988	Doo-hwan Chun		
Sixth Republic	1988–1993	Tae-woo Roh	- Direct presidential election - Single five-year presidential term - Creating an authority to inspect the government offices by parliament	- Urban modernization - Revitalising derelict urban area - U-city - Creative city - Shrinking city - Ageing community - Smart City
	1993–1998	Young-sam Kim		
	1998–2003	Dae-jung Kim		
	2003–2008	Moo-hyun Roh		
	2008–2013	Myeong-bak Lee		
	2013–2016	Geun-hye Park		
	2017–	Jae-in Moon		

Table 4-1 Brief summary of Republic of Korea (source: author)

Between the Fourth and Fifth Republic, South Korea experienced another military coup by the security commander, Doo-hwan Chun, who also became the president of South Korea. A number of citizens were sacrificed for a liberal democracy against his tyrannical dominion and thereby the Sixth Republic was founded through direct

¹¹ Myon Chang, the vice president of South Korea and the Prime Minister of the Second Republic, led the government

¹² Supervised by Major General Chung-hee Park, who became the president of South Korea, after a military coup in 1961

presidential election with the lack of a democratic process. Since the 1980s, in addition to the evolution of the economy, technology and built environment, democratization and political liberalisation were also developed by the better educated and more affluent citizens in the Sixth Republic. South Korea has gradually stabilized into a liberal democracy. The National Assembly has finally worked properly under the liberal democratic context (and 1987 Constitution) since the late 1980s and the Korean government system was divided into the legislative, the judicial and the administrative branches practically. This circumstance created a type of authority to inspect the government offices by parliament. Furthermore, a five-year presidential term was fixed by the Constitution in order to prevent another autocracy. From the late 1990s, an active participatory democracy was begun by new parties which consisted of intellectual experts. In particular, the development of the Internet hugely impacted on Korean politics by encouraging citizens to express their opinions regarding society, policies and politics.

As politics and the government system in South Korea evolved, the aims and ideas of urban planning were also developed. Whilst economic development was the most significant agenda in the 1960s and 1970s, the governments between 1988 and 1998 paid attention to urban modernisation. In the 2000s, rapid urbanisation, globalisation and industrial restructuring brought about inevitable social and economic problems including extreme social polarisation, disparity between urban and rural areas and the deterioration of old urban areas. To resolve these issues, physical development in urban space was introduced. In particular, the Roh administration from 2003 started to consider the way in which derelict urban areas (which represented some of the poorest areas in the city) would be revitalised. The idea of U-City and creative city was also suggested by experts such as academia, urban planners and civil servants. Furthermore, the increase of a shrinking city and an ageing community became new urban problems in the 2010s and both the

national and local government believed that the concept of smart city will be a new silver bullet as a strategic urban scheme.

Compared to the past, the current government in the Sixth Republic (Moon administration) consists of 18 executive ministries and four non-executive ministries based on the revised Government Organization Act amended in 2018 (Ministry of the Interior and Safety, 2020). Of all, four government organisations are related to the implementation of urban planning and regeneration: Ministry of Land, Infrastructure and Transport, Ministry of Oceans and Fisheries, Ministry of Science, ICT and Future Planning and Ministry of Environment. The role of the Ministry of Land, Infrastructure and Transport is managing the development of national land and the construction of the city including highways, railroads and urban infrastructures. This is the main organisation which is responsible for all urban planning projects. In terms of the Ministry of Oceans and Fisheries, the ministry controls harbours, marine circumstance and the development of fishing villages. In particular, the ministry mainly manages port development projects in South Korea. Whilst the two ministries are directly related to urban planning and urban regeneration projects, the other two ministries impact indirectly the delivery of urban planning projects. The Ministry of Science, ICT and Future Planning supports the establishment of a smart city, which becomes one of the hottest urbanisms in the current era, by providing the latest technology¹³ information, knowledge and relevant infrastructures. Furthermore, urban planning projects are strongly related to nature such as water, mountains and land. Since the Ministry of Environment is responsible for the conservation of the environment, the ministry affects the policy making process within urban regeneration projects.

¹³ Such as Information and Communications Technology and Internet of Things

Year	1948	2020
Executive ministries	Agriculture and Forestry	Agriculture, Food and Rural Affairs
	Commerce and Industry	Trade, Industry and Energy
	Education	Education
	Finance	Strategy and Finance
	Foreign Affairs	Foreign Affairs
	Home Affairs	Government Administration and Home Affairs
	Justice	Justice
	National Defense	National Defense
	Postal Services	Science, ICT and Future Planning
	Social Affairs	Health and Welfare
	Transportation	Land, Infrastructure and Transport
	-	Unification
	-	Oceans and Fisheries
	-	Gender Equality and Family
	-	Employment and Labour
	-	Environment
	-	SMEs and Start-ups
	-	Culture, Sports and Tourism
Nonexecutive ministries	Government Administration	-
	Government Legislation	Government Legislation
	Planning	-
	the Bureau of Public Information	-
	-	Personnel Management
	-	Patriots and Veterans Affairs
	-	Food and Drug Safety

Table 4-2 Difference of government structure between 1948 and 2020 (source: author)

Local Autonomy

To promote administrative efficiency, administrative districts were reorganised several times as the national government system and government structure were developed. In South Korea, the administrative district system is a basis for local administration as a governmental unit. In 2020, South Korea is divided into 17 regional government-level authorities: one special city (Seoul¹⁴), six metropolitan cities (Busan, Daegu, Incheon, Daejeon, Gwangju, and Ulsan), eight provinces with one special autonomous province (Jeju island), and one special autonomous city (Sejong). Both cities and towns had further subdivisions¹⁵ (National Geography Information Institute, 2017a).

¹⁴ The capital city of South Korea

¹⁵ Major cities were divided into wards (Gu) and precincts (Dong). A province was composed of counties (Gun) and cities (Si) with a population of more than 50,000. A county consisted of towns (up) with a population of 20,000 and more each, townships (Myeon), and villages (Ri).

The administrative system has been mainly reformed since the 1960s in order to respond to urban expansion caused by the rapid increase of population. From this time, some major urban areas became municipalities directly managed by the central government. Busan was the very beginning of such a transfer, and large province-level cities such as Daegu, Incheon, Gwangju, and Daejeon subsequently followed until the 1980s. The Kim administration in 1995 (Table 4-1) totally reformed the administrative districts aiming to balance between the urban and rural areas. The central government endeavoured to secure enough land for urban development, to improve administrative efficiency during the rapid urbanisation process, and to address inconsistencies between old administrative districts and newly built urban areas based on outcomes of urbanisation. The directly controlled municipalities designated in between the 1960s and 1980s were promoted into metropolitan cities through the land consolidation process. As a result, five metropolitan cities including Busan, Daegu, Incheon, and Daejeon were established. Furthermore, the city of Ulsan was also upgraded into a metropolitan cityhood in 1997. In 2012, the administrative districts were shaped likewise today. Jeju island became a special self-governing province, the unique area in South Korea. An administrative city, Sejong, which became a metropolitan autonomous city, was also created.

The restructuring of the administrative districts contributed to the South Korean government beginning local autonomy. Although a local autonomy law was initially enacted in 1949, it was ineffective until the 1990s. Under the autocracy and military rules, all local governments including regional-level governments were completely managed by the central government. The National Assembly finally passed the revised Local Autonomy Act amended in 1989. Under the revised Act, the election for composing local councils was held in 1990 and the local council was established in 1991. The actual local autonomy was begun at this point. The scope of a local authority became wider and ultimately covered jurisdiction, administrative

management of local government, citizens' welfare, urban development, education, culture, art, public safety, and industries including agriculture, forestry, trade and factories.

With the introduction of local autonomy, the role of local residents became important and the opportunity for local residents' participation in politics also increased. A local self-governing body plays an essential role in South Korean local autonomy and the administrative organisation, as a legal entity, is constituted as representative of local residents. Whilst the presidential election (South Korean citizens already have voting rights) did not impact local residents' lives, the municipal election, which is a basis of local autonomy, affected their lives directly. They were able to express their political perspective and to elect self-governing bodies, both the members of local councils and the heads of local governments such as the mayor of the metropolitan city and the governors of provinces, which will deliver voters' preferred policies. Local residents also have the right to recall the self-governing bodies if there is a type of significant problem which violates the Constitution. Regardless of the development of local autonomy, however, financial autonomy is still a challenging agenda to date. The more the local government achieves financial autonomy, the more local autonomy will approach towards complete local autonomy. Based on the above explanation, it will be an interesting aspect in this research to what extent and the way in which the development of the governance system and actors affects the urban regeneration process particularly regarding policy mobility.

Economy & Industry: Rapid economic development and crises

After the Korean War, South Korea was one of the poorest countries across the world. The gross domestic product per capita of South Korea was only \$79 US dollars, which was lower than that of several sub-Saharan countries (UNDP, 2001). As Chung-hee Park, the third president of South Korea, strongly drove the national government to

concentrate on economic development through a five-year economic development plan, industrialisation was accelerated by adopting an 'outward-looking strategy' in the 1960s (Savada and Shaw, 1992). The strategy was the best approach for the South Korean government because the country had a number of challenges in developing industries such as the lack of natural resources and a tiny domestic market. Labour intensive manufacturing industries and export-led industries brought benefits for South Korea as competitive advantages.

Although the close relationship between the central government and chaebol¹⁶ became one of the most controversial social problems in the current era regarding monopoly, oligopoly and unfair transaction, it is an indisputable fact that the chaebol catalysed the development of cities as well as South Korea. The former president's (Chung-hee Park) administration dominated a financial system and thereby the national government enabled the provision of diverse incentives such as tax breaks and cheap and free financial funding. In particular, this facilitated the Korean chaebol to take out loans easily under the name of national economic development (Hundt, 2009). Based on the government's intentional and strong support, chaebols tried to emulate developed countries' technology, products and programmes such as Japanese electronic products (Samsung) and vehicles (Hyundai). Moreover, they endeavoured to develop new technology and upgrade productive efficiency in order to compete in the global market. When they achieved relevant technology, knowledge and global competitiveness, they were able to sell their products and services to another countries. This resulted in the rapid growth in exports and incomes (the inflow of foreign capital) which was used to supplement the shortage of domestic savings (Savada and Shaw,

¹⁶ Usually defined in South Korea for a large family-owned business conglomerate that is run and controlled by an owner or family such as Samsung, LG, and Hyundai. Based on government's supports, they became one of the five largest private companies in South Korea and this has created a social problem currently.

1992). Consequently, it led directly to the economic development of South Korea between the 1970s and 1980s.

However, due to the dramatic decrease in exports and foreign orders, the South Korean economy plummeted in 1989 and this brought about deep concern in the industrial sector. Some experts engaged in the Ministry of Trade and Industry analysed that such a poor export performance was caused by naturalised structural problems embedded in the South Korean economy: an overly strong Korean currency, the *won*, increasing wages and high labour costs, excessively high interest rates and frequent strikes of trade unions (Savada and Shaw, 1992). This caused an increase of inventories and severe cutbacks of various types of products from electronics, textiles to vehicles. To manage these challenges, the central government intervened less in the national economy and adopted a conservative monetary policy with tight fiscal approaches. Over two decades from the 1970s, the government's money supply nearly halved from 30%. As a result, South Korea confronted global competition through liberalised imports and foreign investment policies.

Until the early 1990s, the South Korean economy was stable and there was a certain growth in Gross Domestic Product. However, in 1997, these circumstances significantly changed, and the South Korean government experienced an unprecedented financial crisis from Southeast Asian countries. As speculators attacked several Southeast Asian countries' currencies, the Korean *won* was also impacted and began to depreciate sharply. Furthermore, non-performing loans at several Korean merchant banks caused many problems and this severely exacerbated the situation. Thus, the South Korean government had no choice but to request financial support from the International Monetary Fund (IMF) and the IMF approved the request urgently. From this point, all sections of South Korean society struggled to overcome challenges systemically (government's approach) and sympathetically (citizens' approach

including a symbolic movement, donating private valuables for the country). In this context, Daewoo, one of the biggest private firms in South Korea at that time, was dismantled and a number of merchant banks were closed by the central government.

Based on such painful legacies, Dae-jung Kim, the eighth president of South Korea, started to reform the national economic system from the government-led, centrally planned investment model to a market-led model. He also endeavoured to expand economies by keeping a certain level of growth rate (around 10 %) between 1999 and 2000 (National Geography Information Institute, 2017a). In particular, he expected a highly connected society in the future so that he focused on promoting the setup telecommunication infrastructure. This became a sound background for the development of information and communication technology and relevant industries after the 2010s. Both governments' and citizens' effort finally terminated the IMF management system in 2001. Although South Korea suffered from the global financial crisis again in 2007, it was able to avoid a recession through proper stimulus measures and domestic consumption of products which reimbursed the decreased amount of exports. Meanwhile, since the 2010s, due to the development of information communication technology and the introduction of the concept of a fourth industrial revolution, the South Korean government concentrated on developing a relevant industrial cluster by using the new urbanism, a new type of urban regeneration, the smart city. This will significantly affect both the national economy and industry in the future.

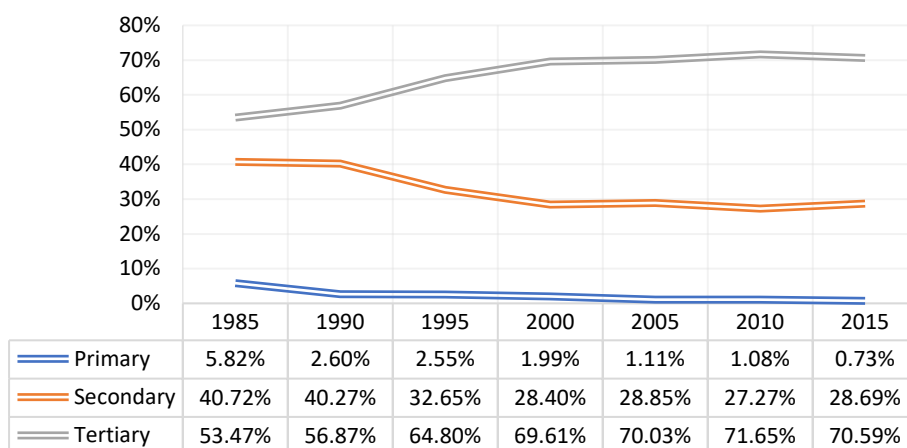


Figure 4-4 The transformation of Industrial Structure¹⁷ based on GRDP in Busan (source: BDI; revised by author)

The economic context of South Korea also impacted the city of Busan, a maritime logistics hub in northeast Asia with its global leading mega ports. Until the 1970s, the manufacturing industry was flourishing in the city. Since the early 1980s, however, Busan suffered a severe economic recession with the overall decline of second industries, while tertiary industries increased dramatically (Figure 4-4). In particular, the typical industry in Busan such as the shoe industry, textile industry and heavy industry moved out to find cheap workforces and better economic support. This tendency meant that the characteristic of Busan's industry, which was strongly recognised as a city of the manufacturing industry in the modern era, disappeared and was transformed into a tertiary sector of the industry. From the 1990s, with the introduction of local autonomy, the authority of the local government became much stronger compared to the past even though the government still struggled to manage a huge amount of annual budget which was almost supported by the central government. Busan Metropolitan City invested in tertiary industries such as the tourism and film industry strategically and proactively as the next generation of local industry. In 2017, the service industry accounted for more than 70% of the total industry of

¹⁷ Primary industry: Agriculture, Fisheries

Secondary industry: Manufacturing, Mining, Construction, and Energy

Tertiary industry: Service

Busan Metropolitan City focusing on film and tourism with a part of manufacturing industry (Table 4-3).

Name	Busan Metropolitan City			
Area	770.04 km²			
Population	3,520,306			
GRDP	KRW 25.65 million per capita (GBP £16,951 per capita)			
Industry	Service	70.7 %	Major industry	Film, Tourism
	Manufacturing & Mining	19.6 %		Shipbuilding equipment
	Construction	6.3 %		
	Agriculture & Fisheries	0.7 %		
	Others	2.7 %		
Products	Ship and auto components, shoes			

Table 4-3 Overview of the city of Busan in 2017 (source: KOSIS; revised by author)¹⁸

From 2003, as the Noh administration emphasised decentralisation, the educational and research department within the tertiary industry was far more stressed. The city became a centre of marine science and R&D, and finance through the movement of government research institutions, agencies, and educational facilities. These institutions included the Korea Maritime Institute (KMI), the Korea Institute of Ocean Science & Technology (KIOST), the National Fishery Products Quality Management Service, the Korea Hydrographic and Oceanographic Agency (KHOA), and the Korea National Maritime Museum. Regarding financial institutions, Korea Exchange (KRX), Korea's sole securities exchange operator, the Korea Technology Finance Corporation, Korea Asset Management Corporation, Korea Housing-Finance Corporation, Korea Housing & Urban Guarantee Corporation, and Korea Securities Depository, Korea Maritime Guarantee Insurance, Maritime Finance Centre, The Korea Shipping and Maritime Transportation Co., Ltd, and Korea Asset Management Corporation all moved into Busan Metropolitan City.

Industrial restructuring and the economic status of the city of Busan directly influenced the local geographical characteristics, the aim of

¹⁸ Korean Statistical Information Service (2017)

urban planning and the delivery order of regeneration projects in specific locations. Traditional manufacturing industries were distributed over the west side, because transportation infrastructure (national highways, port and airport, the location of North Port and Eco-delta City) was established and all interconnected in the west side of the city. Since the delivery of products is significantly essential for the secondary industry, accessibility is one of the most important items on the agenda of conventional urban planning. This is reflected in the idea of urban planning between 1960s and 1970s. However, the service industries, the most dominant industry in Busan currently (Table 4-4), were distributed widely throughout the east side of the city – the location of Centum City, the first empirical case study in this research. Ironically, the service industry requires an empty urban space where many relevant firms can agglomerate together. Unlike the west side of Busan (a well-developed area in the past), there was a spacious under-developed area in the east side of the city. So, this area was developed as a centre of the service industries in the 1990s. The area, developed earlier than the east side, deteriorated and thereby an urban regeneration project was also begun. Consequently, urban regeneration projects in Busan were consecutively implemented from the east side of the city to its west side. The detailed account of this will be discussed in the following empirical chapters in this research.

Population & Urbanisation: Expansion of urban area

As the last urban issue, this section discusses population and urbanisation in South Korea and Busan. The change of population is closely related to the change of urban area. For instance, the population is directly connected with work forces for the manufacturing industries which was a growth machine of South Korea between the 1960s and 1980s (National Geography Information Institute, 2017b). Moreover, the movement of population from rural areas to urban areas brought about urbanisation which caused a number of urban problems: rapid urbanisation, urban

sprawl, pollution and social inequity. Furthermore, in the current era, a low birth rate and the beginning of an ageing community became one of the priority urban issues in South Korea. So, the exploration of population and urbanisation is able to help navigate the way in which the idea of urban regeneration is developed over time in South Korea and Busan.

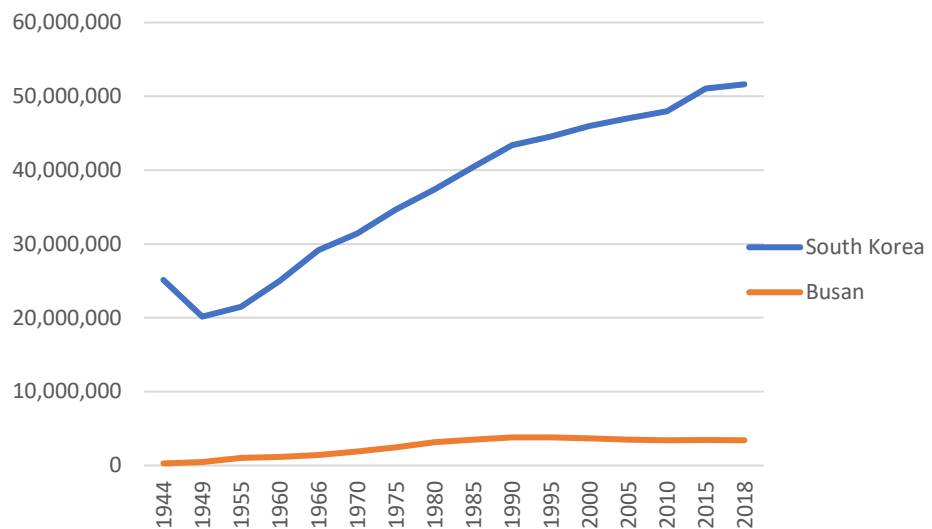


Figure 4-5 Population of South Korea and Busan (Source: KOSIS; revised by author)

Since the Republic of South Korea was established in 1948, the population has grown gradually. Based on the first national census taken in 1949 (National Geography Information Institute, 2017b), the total population of South Korea was approximately 20.2 million (Figure 4-5). During the early 1950s, after the Korean War, the population increased markedly. For instance, regarding the city of Busan, refugees from North Korea and other areas in South Korea streamed into the city. The population growth in South Korea accelerated between 1955 and 1966 by recording a high growth rate, an annual average of 2.8 %. The growth rate slightly reduced to an annual average of 1.7% between 1966 and 1985. The total population of South Korea in 1985 was around 40.5 million. Since then, the annual average growth rate has been approximately less than 1%. In 2018, the population of South Korea was estimated to be

about 51.6 million whilst that of Busan has decreased continuously from the highest point in 1995, 3.8 million.

As the population of South Korea increased, the city of Busan as well as South Korea was rapidly urbanised. The degree of urbanisation was usually measured by urban population¹⁹ (World Bank, 2018), the percentage of the total population living in urban areas. Between 1960 and 1986, the urban population of South Korea grew from 28.5 % to 66.6 % of the total population (Figure 4-6). This urban increase was mainly caused by migration rather than natural growth of the urban population. During the post-Korean War period in the 1970s, a number of residents in rural areas left their historical, ancestral towns and villages in order to find greater economic and educational opportunities in cities. According to surveys (Savada and Shaw, 1992), people migrated to urban areas due to "new employment or seeking a new job," "job transfer," "business," "education" and "a more convenient area to live." In 1998, the degree of urbanisation was approximately 80 % and this level has been maintained so far (Figure 4-6), while the population of Busan surpassed 3.8 million in the same year (Statistical Service Planning Division, 2019).

South Korea was traditionally popular among the densely populated countries due to its geographical characteristic. The mountain area accounted for approximately 70% of South Korean land area whilst South Korean people tended to live in the lowland areas.

Urbanisation accelerated the increase of the population density significantly. For instance, in 1989, the population density was about 425 people per square kilometre, which was more than sixteen times the average population density in U.S. This was also higher than the population density of Japan, 323 people per square kilometre (Savada and Shaw, 1992). Regarding popular cities such as Seoul

¹⁹ The degree of urbanisation in South Korea, however, is not fully described through this method. In South Korean statistics, urban area was defined as those municipalities with 50,000 or more inhabitants. Although many settlements with fewer than 50,000 inhabitants were officially classified as rural, they could be regarded as urban in terms of the living conditions and occupations of the inhabitants.

and Busan, actual population densities were much greater than the average. In early 1975, the density of cities which had more than 50,000 inhabitants was around 3,700 people per square kilometre. In 1998, the population density of Seoul recorded 17,030 people per square kilometre while that of Busan was 8,504 people per square kilometre. They increased from 13,816 and 7,272 in 1980 respectively (KOSIS, 2020). This indicates how the population density of urban areas increased severely.

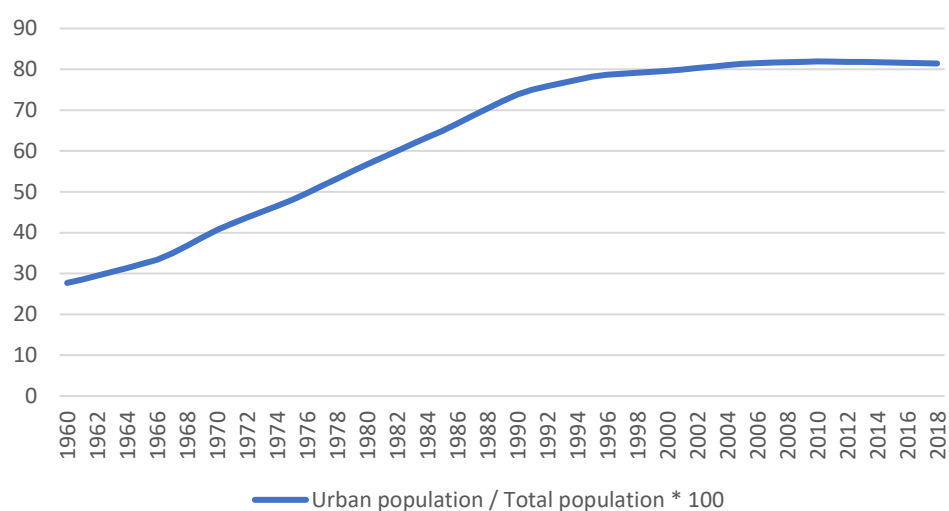


Figure 4-6 The degree of urbanisation (source: Statistical Service Planning Division; revised by author)

Such migration and population density in urban areas brought about serious social problems – population segregates geographically – such as burgeoning overcrowding in urban areas and the decreasing competitiveness of rural areas due to the lack of labour forces – youthful and productive members. To alleviate overcrowding in urban areas and to resolve diverse challenges surrounding rural areas, both the national and local government in South Korea began to create a master plan or planning strategies from the 1970s. In the early 1970s, the Park administration launched the ‘Saemaul undong (new community movement)’ (Sonn and Gimm, 2013) to reconstruct rural areas and encourage rural people to improve their quality of lives in the villages. It also promoted a narrowing of the gap between

rural and urban areas and prevented the additional outflow of rural labour forces. Furthermore, the South Korean government supplied abundant housings, as the population of the capital city and large local cities expanded. In particular, these initiatives were proactively delivered in southeast coastal cities such as Busan, Pohang, and Ulsan. This caused the construction of large-scale residential areas which consisted of high-rise apartment complexes in order to resolve the shortages of housing (National Geography Information Institute, 2017b).

The extreme crowding also affected the quality of life of the urban citizens. The constant growth of population led to the shortage of space for living and working, and this grew more severe. Thus, urban people had to maintain an amicable relationship with colleagues and neighbours within small, crowded spaces, in which people competed for limited resources. Furthermore, the agglomeration of factories and employees in urban areas resulted in serious environmental pollution. For example, the rapid increase of vehicles led to the widespread use of natural resources such as coal and gas for heating which was directly connected with severe levels of air and water pollution. This also indirectly influenced the quality of life. To improve the above issues, proactive strategic urban planning was implemented through the establishment of satellite towns. Civil servants and urban planners sought to build a downtown for commuters who worked in large urban areas. They believed that satellite towns would alleviate the shortage of housing and pollution in urban centres. Moreover, this enabled playing a role as catalyst for decentralisation. With the creation of satellite towns, the national government endeavoured to relocate many government ministries and agencies out of the capital city. For instance, military headquarters, the army, navy, and air force, were relocated to Daejeon (National Geography Information Institute, 2017b).

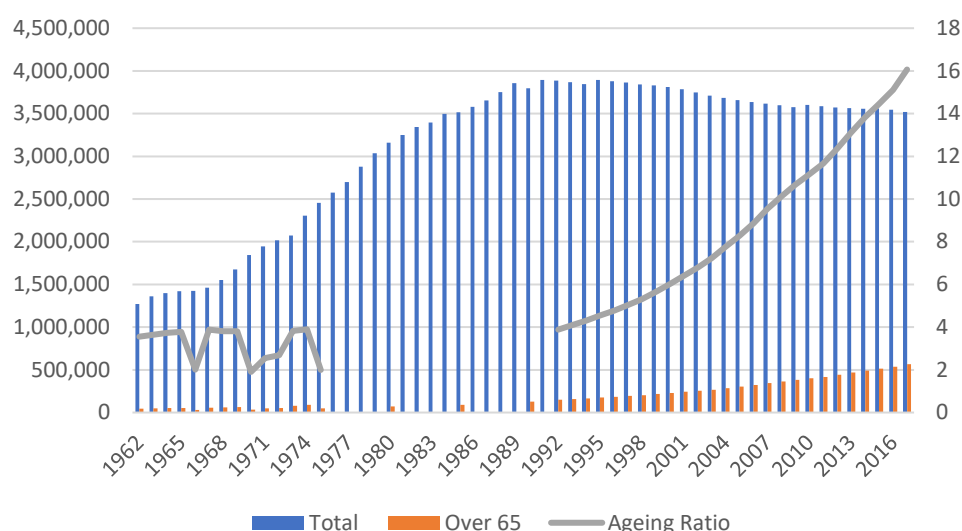


Figure 4-7 Comparing population between total and age over 65, with Ageing Ratio in Busan (source: KOSIS & Busan Metropolitan City; revised by author)

Since the 2010s, one of the prior social problems regarding population and urbanisation was the ageing community and the increase of the elderly. This was especially evident in the city of Busan (Figure 4-7). The ratio between the total population and the number of people over 65 years old in 1962 was only 3.5% and it was maintained until 1992. In this period, this maintenance was possible due to the national government's campaign for birth control in order to manage a rapid growth of population. However, since 1992, the gerontification of the baby boomer generation and new urban lifestyle – later marriage ages for both men and women, higher education levels, a greater number of women in the labour force – contributed to becoming an ageing community rapidly. This trend became worse in rural areas such as farming and fishing villages due to the migration of the youth. Hence, the ratio in 2017 was around 16% and this means that South Korea must consider and respond seriously to this trend (Figure 4-7). Since the ageing society directly led to the decline of industrial productivity of the city as well as the country, civil servants and diverse experts in the field of economy, urban planning, geography, anthropology and sociology have to resolve that issue. For instance, in South Korea, the Ministry of Land,

Infrastructure and Transport, government research institutions and local governments developed the urban decline index (Seoul National University R&DB Foundation, 2010). Based on this index, ageing communities and shrinking cities were articulated by civil servants. Various types of policies, programmes and ideas to improve such a tendency were reflected by urban regeneration projects.

Spatial planning: From national to local level

The above-mentioned urban issues brought about the necessity for strategic urban planning managed by both the national and local government. 'Planning is a means by which society collectively decides what urban change should be like and tries to achieve that vision by a mix of means (Rydin, 2011)'. As Rydin (2011) stated, it is necessary to explore the history of urban planning in South Korea and Busan because it describes the society's decision concerning urban issues over time. This also helped to understand the development of the urban regeneration idea, which will be discussed in empirical chapters.

Institutionalisation of spatial issues within the Korean context

The Act regarding the national territory framework was required from the 1960s in order to avoid conflicts among the national territorial plan, regional plan, urban planning and architecture when they played a role as urban interventions against urban problems. However, the framework was not officially systemised and legalised until the 2000s. With the enactment of the Framework Act on the National Land and National Land Planning and Utilization Act, the Comprehensive National Territorial Plan (CNTP) and other national territorial policies were practically created. The CNTP is the top-level of plan regarding national territory in South Korea which plays a role as a guideline of the national government. Diverse additional laws (such as Seoul Metropolitan Area Readjustment Planning Act and

Urban Development Act) were enacted and modified to support the CNTP effectively and efficiently.

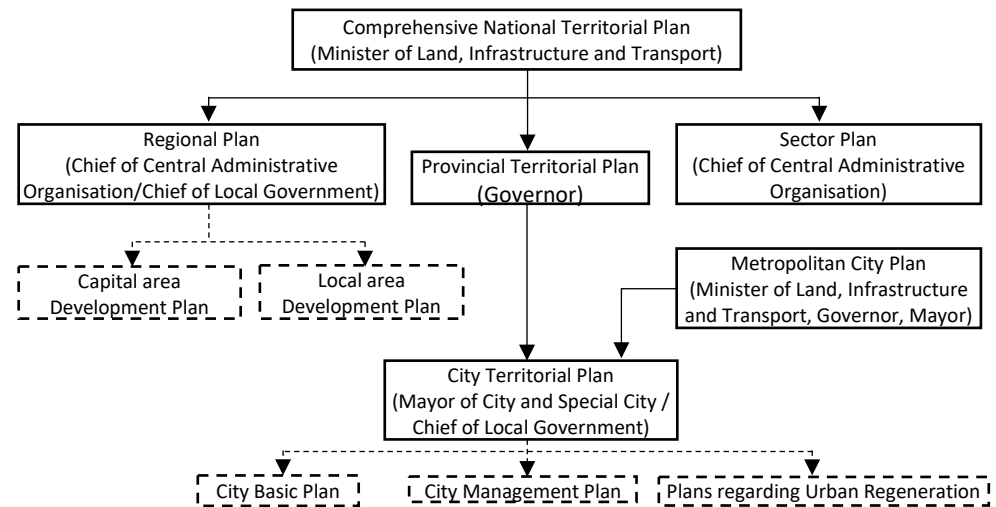


Figure 4-8 Hierarchy of the Territorial Plan with governance system in South Korea
(source: Ministry of Land, Infrastructure and Transport; revised by author)

Based on the Framework Act on the National Land in South Korea, the CNTP is categorised into Provincial Territorial Plan, City Territorial Plan, Metropolitan City Plan, Regional Plan and Sector Plan (Figure 4-8). Of all these, the Provincial Territorial Plan and City Territorial Plan became the fundamental axis of the CNTP. While the Provincial Territorial Plan builds a long-term provincial level of development plan, the City Territorial Plan creates a long-term metropolitan strategic development. In detail, the City Basic Plan suggests aims and objectives of the development and the City Management Plan provides a detailed practical plan of the City Basic Plan. To avoid any conflicts and balance between the Provincial and City Territorial Plan, for instance, transportation and environmental agendas, a Metropolitan City Plan is suggested between them. Unlike other plans, the Metropolitan City Plan is on the basis of National Land Planning and Utilization Act, which is more practical, and concrete compared to the Framework Act on the National Land.

The Regional Plan²⁰ and Sector Plan²¹ are implemented independently (Moon et al., 2013).

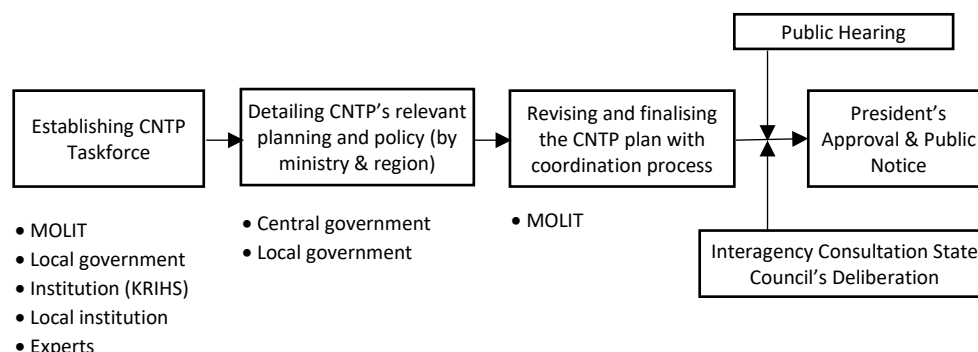


Figure 4-9 Delivery Process of the CNTP (source: Moon et al.; revised by author)

The delivery of the CNTP (Figure 4-9) is usually commenced when central government agencies and heads of metropolitan councils submitted a proposal to the Ministry of Land, Infrastructure and Transport (MOLIT). The MOLIT examines and oversees the proposal based on jurisdiction and prepares to deliver the CNTP. When MOLIT thinks that the proposal is reasonable to become the CNTP, it instructs the heads of the central government agencies, mayors and governors to establish concrete policies and plans that would be sources of the CNTP. After the establishment of specific action plans for the CNTP, they submit them to MOLIT for the final revision. When MOLIT finalises the CNTP draft, it is examined by the public through a public hearing. In particular, a group of research teams participated in this process – additional advisory councils and forums were held (Moon et al., 2013) – to revise the CNTP. Such a research group consisted of experts from diverse sectors including academia, industry, institution, private and government. Finally, the proposal is announced after the approval of the national territory policy

²⁰ Area-wide development Plan / Capital region Plan / Five-year regional development Plan / Comprehensive Plan for Rearrangement of Agricultural and Fishing Villages / Specific region Plan (Development promoted district, Lagged area, Islands, Abandoned mine area) / Other plans (Administrative City, Free International City, Enterprise City, Innovation City)

²¹ Transportation / Distribution & Circulation / Housing / Water resource and Energy – Environment / Culture & Tourism / Information / Industrial location

committee, cabinet meetings and the president of South Korea. It should be revised every five years.

Comprehensive National Territorial Plan (CNTP)

National territorial and regional development policy was systemised in the 1970s through the establishment of the initial National Territorial Plan. Before that period, the South Korean government could not afford to concentrate on other issues except the land readjustment project to rehabilitate the devastated land caused by the Korean war. The project included designating greenbelt in order to avoid extreme expansion of cities, programmes for farmland conservation, and limiting the widening of urban sprawl. Since the 1960s, South Korean national territorial policy and planning aimed to create effective urban spaces and to build roads, highways, railways, industrial complex, and urban infrastructures to support economic development. Moreover, due to urbanisation, people had gathered in urban areas significantly. Hence, the central government focused on supplying enough housing in urban areas. Since urban development was implemented within a limited space, this led to the construction of a huge number of apartments, which became a symbol of urban space in South Korea.

The CNTB was firstly started in 1972. Every single planning, practice and programme in South Korea is processed within the scope of the National Territorial Plan. In addition to developing urban infrastructure and to supporting the revitalisation of devastated areas, the planning sought to establish a way for development and to promote strategic economic development, a balanced development of the nation, and reasonable management of national territory. As the top-level of urban policy regarding national territory in South Korea, the CNTP investigated any problems of national territory and created long-term comprehensive strategies in order to resolve urban problematic issues. It includes urban policies for population, industrial restructuring, living environment improvement and environmental

conservation. The CNTP also outlined an image of the future of urban areas in response to future economic and social change.

The first CNTP was delivered between 1972 and 1981. Through this, urban infrastructures including highways, railways, and dams, to secure a stable water resource and energy, were built. As highways and arterial road networks were connected, citizens were easily able to commute to all cities across the country. Also, industrial clusters were constructed in the capital area and southeast area such as Busan and Ulsan. The central government achieved \$10 billion U.S. dollars from exports through the construction of industrial complexes (Moon et al., 2013). However, the CNTP engendered several challenges. Since the CNTP focused too much on the development of urban areas, especially the capital area and southeast area, gaps between cities were widened and social polarisation was exacerbated. Furthermore, in Seoul and Busan, the level of population density increased dramatically. This led to the increase of property value within urban areas of large cities. In this context, conflicts between civil servants and citizens regarding greenbelt, which interrupted property rights for residents, constantly happened.

The second CNTP, implemented between 1982 and 1991, emphasised the importance of natural environment and the mitigation of disparity between capital and local areas whilst the first CNTP concentrated on the physical urban development. Foremost, the South Korean government was given a warning of environmental pollutions due to the rapid industrialisation and urbanisation. The central government forced construction companies to follow environmental impact assessments before beginning development projects. Moreover, the national government urged factories improperly located within large cities to move out to the suburbs by using environmental protection laws. Furthermore, in this period, Acts on Special Measures Concerning the Specific Areas to Promote Comprehensive Development were created. Through this law, balanced regional development was promoted. The second CNTP

planned a decentralisation of urban functions such as the distribution of administration, finance and education in the capital region. This aimed to reduce the population density of the capital region and to alleviate the disparity between capital/large cities and local areas regarding income, living environment and work opportunities. Regardless of these efforts, such was the level of disparity that this was not significantly mitigated.

Regarding the third CNTP from 1992 to 2001, it sought to resolve problems emerging from both the first and second CNTP. As the first and second CNTP under-emphasised the development of the southwest area, the third CNTP attempted to develop the west coast highways which connected with the capital region. In this context, several laws regarding balanced development, such as the Seoul Metropolitan Area Readjustment Plan, the Farming & Fishing Village Development Promotion Act, the Balanced Development Act, and the Small & Medium Business in Local Areas Promotion Act, were enacted and modified. The third CNTP was evaluated as a reasonable plan which followed standard procedures. From the establishment of the plan, relevant government departments including the Ministry of Construction and Transportation and 12 research institutions participated in a consultation. Moreover, a North Korea agenda was firstly included in the plan. However, the third CNTP did not respond properly to the rapid change of global economic circumstances and national social, economic and cultural changes. Since it failed to build a long-term strategic plan for the development of national territory, South Korea struggled to overcome unexpected financial crisis and limitless global competition in the 2000s (Moon et al., 2013).

The fourth CNTP planning from 2000 to 2020 was keen to promote a participation-based administration for national territorial plans. Public participation is officially embedded in the national territorial plan. In particular, through the development of information and communications technology, public participation in the delivery of

CNTP – planning to develop under-emphasised non-capital regions for balanced development – was emphasised. Furthermore, the CNTP also enhanced the improvement of the quality of life, under the name of social equality. This means that the scope of sustainability within the CNTP became widened from an economic sustainability focused plan to an environmental and social sustainability focused plan.

Provincial and City Territorial Plan

The Provincial and City Territorial Plan was basically created and modified under the impact of the CNTP. It depended on the governor's or mayor's decision. In this section, the City Territorial Plan of Busan Metropolitan City will be discussed. Historically, the policy-making process for urban planning in Busan has been delivered through a top-down approach since the Japanese colonial era (1937). For instance, Busan town planning district No.188, the very first urban planning in Busan, was created by the Japanese Government-General of Korea. It was strictly managed and planned by the Japanese government in order to make the city of Busan its logistics base, for effective and efficient military transportation in wartime. However, the top-down-led urban planning implemented by the Japanese government brought about many urban problems in the future such as urban sprawl, high concentration of population in urban centres, and the lack of private transport infrastructure in urban centres (Busan Metropolitan City, 2017).

During the Korean War from 1950 to 1953, Busan was the only city in which the North Korean army did not invade. After the war between 1950s and 1970s, South Korean government and other city governments sought to restore the area devastated by the war. Meanwhile, the city of Busan had to manage urban sprawl and urban expansion caused by the influx of refugees. At that time, Busan was very crowded with many refugees and became a symbol of reckless development. The city government endeavoured to improve urban

infrastructure such as the transportation system, water, sewage, and energy supply and distribution system. Thus, municipal-led urban planning was required, and it has been practically implemented since 1972.

		The 1 st	The 2 nd	The 3 rd	The 4 th	...
Korea	Policy Name	Comprehensive National Territorial Plan ²²				
	Year	1972~1981	1982~1991	1992~2001	2000~2020	...
	Aim of the central government	-	Localisation	Improving environmental circumstance	High-tech industrial city	...
Busan	Policy Name	Busan Urban Master Plan ²³				
	Year	1972 (1972~1986)	1985 (1980~2001)	1992 (1990~2011)	1996 (1994~2011)	...
	Vision	- Pleasant city - Port city as a gateway	- Managerial city - Tourism city - Productive city focusing on commerce and industry	- The secondary capital city - High-tech industrial city	- Global city - Sustainable maritime city	...
	Aim of the local government	- Construction of urban infrastructure - Creating pleasant urban space - Preventing urban sprawl	- Managing metropolitan area and the urban centre - Land development (housing) through the enlargement of coastal line	- Balanced development within urban area - Revitalising local economy - Creating a new city image	- Improving public transportation - Securing social welfare - Creating a comfortable waterfront area	...
	Characteristics	Economic aspect	Economic aspect	Environmental aspect	Environmental / Social aspect	...

Table 4-4 The relationship between central government's planning framework and the local government's planning policy
(source: Busan Metropolitan City; revised by author)

The City Territorial Plan, so-called the Busan Urban Master Plan (Table 4-4), was established in the 1980s to build a blueprint for the future of the city and local urban development. From this time, Busan Metropolitan City proactively began to consider integrated urban interventions which included the field of local economy, society, environment and politics. For instance, since the concept of localisation was strengthened in 'the second Comprehensive National Territorial Plan', civil servants from the national government attempted to provide the city of Busan with the title of 'Managerial

²² The top-level urban planning system in South Korea

²³ The top-level urban planning system in Busan Metropolitan City

city' (Busan Metropolitan City, 2017). The urban planning system in the first City Territorial Plan concentrated on economic development through the construction of housing and urban infrastructure. However, under the second Busan Urban Master Plan, the city government endeavoured to create a large-scale urban area including a new port, with the enlargement of the coastline, and an industrial complex.

Since the idea of sustainable development was revealed in 1987, there were significant changes in the third and fourth Busan Urban Master Plan. The sustainable idea was technically reflected in the plan aiming to secure a safe and stable future for future generations. Basically, Busan Metropolitan City government began to focus on solution-focused planning policies rather than growth-focused ones. Similar to the CNTP, environmental sustainability was considered in the Busan Urban Master Plan in addition to the economic aspect of sustainability. Moreover, the local government attempted to develop urban areas evenly in order to balance social polarisation, which occurred through extremely fast industrialisation. This could be regarded as securing social sustainability. The city government made an effort for economically sustainable development by strengthening the idea of urban entrepreneurialism (Harvey, 1989) as well. The industrial restructuring process in Busan at that time, from the manufacturing industry to the service industry (and emphasising information and telecommunications technology), contributed and urged the local government to consider selling the value of the city/city image for the next generation.

Regarding the 1992 Busan Urban Master Plan, it totally adapted the basic concept of the third Comprehensive National Territorial Plan. Under the plan, Busan Metropolitan City government concentrated on improving the quality of urban life. Since the 1990s, the city of Busan suffered from urban derelict areas, an economically shrunk urban centre due to the relocation of the city hall, and the lack of housing. Consequently, the City Territorial Plan aimed to balance the

developed urban area and derelict urban centre and to revitalise the overall local economy for the citizens. When it comes to the fourth Busan Urban Master Plan²⁴ in 1996, Busan Metropolitan City government aimed to create a new city image, 'Global city', dependent upon the high-tech information industry with the harbour logistics industry. Going beyond the manufacturing industry, the city government sought to develop a tertiary sector of industry through the industrial restructuring process. The local government tried citizens with high-quality services, urban social equity, and comfortable space by integrating the concept of urban regeneration and conservation of nature. In this context, it could be evaluated that the city government actively started to consider a 'sustainability agenda' and applied such consideration to the urban planning process even though the government did not use the word 'sustainability'.

Urban regeneration: Different perspective within traditional urban planning

Since the 1990s, based on spatial planning, the governmental approach towards urban problems was changed in South Korea. By the 1980s, both the national and local government attempted to resolve urban problems through the construction of urban infrastructure. This worked quite well as governments expected at that time. However, due to the limit of land, resources and environmental issues, governments could not maintain such an intervention in the 1990s. Thus, the idea of urban regeneration was incrementally introduced in South Korea and has become dominant in the field of planning policies since the 2000s. Finally, this section will investigate the growth of the urban regeneration idea in South

²⁴ In the official documentation, the fourth Busan Urban Master Plan was termed as the second part of the third Busan Urban Master Plan. However, in this chapter, the author used the fourth Busan Urban Master Plan to avoid confusion caused by complicated terminology.

Korea and its diverse applications to the local area, in particular, Busan Metropolitan City.

Institutionalisation of urban regeneration within the Korean context

The South Korean government delivered comprehensive urban renewal initiatives in the 1960s to manage the negative impacts of rapid urbanisation and industrialisation. Since then, overall urban planning, programmes and projects in South Korea sought to pursue long-term economic growth and development. However, such growth-oriented and housing-led development did not work well as urban issues became complicated and varied as stated in the previous section. The aims and objectives of urban initiatives should be changed going beyond just land-use planning and physical development. In this context, the idea of urban regeneration, which is defined as “a comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change” (Roberts, 2017), was introduced and adapted.

With the enactment of three representative laws regarding urban regeneration: the Act on the Improvement of Urban Areas and Residential Environments, the Special Act on the Promotion of Urban Renewal and the Special Act on the Promotion of and Support for Urban Regeneration, the national and local government endeavoured to promote a more integrated approach to alleviate complicated urban challenges such as economic crises, environmental pollution, and the lack of public participation and social inclusion. Also, more than 40 different legal frameworks at different spatial scales (Table 4-5, Lee and Nam, 2016; cited in OECD, 2019) also impacted the implementation of urban regeneration projects.

Laws	Aims
<ul style="list-style-type: none"> • Framework Act on the National Land • National Land Planning and Utilisation Act • Framework Act on the Regulation of Land Use 	Land use framework
<ul style="list-style-type: none"> • Act on the Improvement of Urban Areas and Residential Environments • Special Act on the Promotion of Urban Renewal • Landscape Act • Housing Act • Building Act • Urban Traffic Improvement Promotion 	Improving built environment in urban regeneration area
<ul style="list-style-type: none"> • Restriction of Special Taxation Act • Restriction of Special Local Taxation Act • Local Tax Act • Restitution of Development Gains Act • Environmental Improvement Cost Liability Act 	Exempting obligations for promoting urban regeneration projects
<ul style="list-style-type: none"> • Housing and Urban Fund Act • State Property Act • National Finance Act 	Funding urban regeneration projects

Table 4-5 A group of laws regarding urban regeneration in South Korea (source: OECD)

Although there were various types of laws which influenced urban regeneration, the urban regeneration project was basically implemented within the scope of CNTP and the Provincial and City Territorial Plan under the Framework Act on the National Land and National Land Planning and Utilization Act. Whilst the City Basic Plan and City Management Plan determined land-use plan as an approach to the national territorial framework, the Urban Regeneration Strategic Plan, the Urban and Residential Environment Improvement Plan, and the Regeneration Strategic Plan designated urban regeneration areas for a specific and place-based approach. All plans regarding urban regeneration were delivered under the Special Act on the Promotion of and Support for Urban Regeneration (Special Act on Urban Regeneration) and the Act on the Improvement of Urban Areas and Residential Environments (Figure 4-10).

Based on the relevant Acts, diverse types of urban regeneration projects could be delivered: mixed-use development in urban derelict areas; conservation of cultural heritages within the city; funding for community-led regeneration projects and strengthening the global competencies regarding smart city technologies. However, the 2012 revised Act on the Improvement of Urban Areas and Residential Environments was revised, and public participation became an

important agenda in the idea of urban regeneration in South Korea. Since it became difficult to implement a large-scale urban regeneration project due to the global financial crisis and the real estate market depression at the end of the 2000s, the revised law provided citizens with a right to participate in the policy making process by emphasising the importance of small-scale urban regeneration projects. Through the enactment of the Special Act on the Promotion of and Support for Urban Regeneration in 2013, two typical types of urban regeneration project – ‘economy-based’ and ‘neighbourhood-based’ regeneration – were mainly delivered. In 2017, the Moon administration launched ‘Urban Regeneration New Deal’ policies to emphasise sustainable urban regeneration and a small-scale neighbourhood-led regeneration.

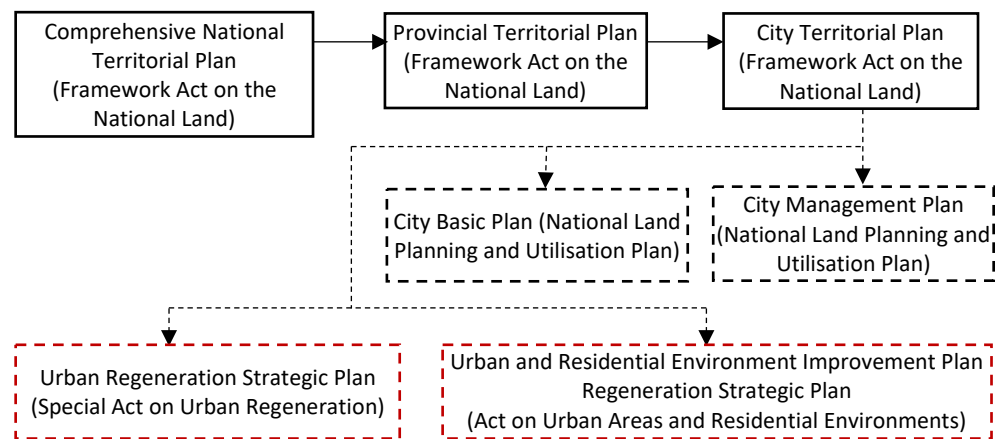


Figure 4-10 Structure of plans with relevant Acts, regarding urban regeneration (source: author)

As the idea of urban regeneration is developed, the governance system which supervises the regeneration project also becomes varied and coordination among a diverse group of actors should be required. Since small-scale local-based urban regeneration becomes popular, the role of local government is important. The local government usually establishes the Urban Regeneration Strategic Plan, the Urban and Residential Environment Improvement Plan, and the Regeneration Strategic Plan. Then, it delivers detailed programmes and practices within the plans. The city government

also financially and institutionally supports projects. Regarding the national government, it supports local governments to implement their plans well particularly through institutional support – deregulation, approval of the city government's plans and resolving conflict between local governments. Furthermore, it also provides local governments with funds through the allocation of budget and attracts private investors for large-scale urban regeneration projects.

In terms of private investors and firms, they usually suggest new strategies for urban regeneration to governments. Also, they endeavour to develop urban derelict areas and to create diverse job opportunities by planning mixed-use urban redevelopment. Citizens and local residents play a significant role in the policy making process within the urban regeneration project. Through local-based creative thinking, they suggest new programmes and practices which enable local communities to be revitalised. In a large-scale urban regeneration, they provide their opinion proactively and this affects the delivery of the urban regeneration project under the cooperation with governments and private investors. To help and support citizens, such as providing opportunities of education and funding, local governments establish Urban Regeneration Support Centres in local communities. Also, the national government, the Ministry of Land, Infrastructure and Transport, builds the Urban Regeneration Assistance Organisation in three public institutions, the Korea Land & Housing Corporation, the Korea Research Institute for Human Settlements, and the Architecture & Urban Research Institute, in order to provide project management, consulting, and training (OECD, 2019).

Urban Regeneration in Busan and diverse applications: From property-led urban regeneration to the idea of a smart city

Between the 1960s and 1980s, the key industries of Busan were shipbuilding, marine industries, machinery and steel. Through the industrial restructuring in the 1990s, tourism and its services became

the main industry of Busan. Furthermore, due to urban sprawl and expansion, the city of Busan confronted endless housing demands and poor quality of unplanned settlements on the hillsides. In this transition, the city government of Busan struggled to address complicated urban challenges such as economic recession, derelict urban areas, environmental pollution and social polarisation. Hence, Busan Metropolitan City government has focused on urban regeneration to manage urban growth economically, environmentally and socially for a couple of decades. The local government's initiatives were varied from large-scale urban regeneration projects in a former military airport, waterfront area, port area and a former military base near the urban centre to small-scale community-led regeneration programmes. In particular, due to globalisation, the local government proactively attempted to learn OECD countries' best examples and practices in the long-term, particularly concerning large-scale projects such as building a strategic planning, facilitating a public private partnership and securing finance. Based on these efforts with the strong support of the national government, the city government sought to build a unique identity and image of the city as a port city, a creative city and recently a smart city (OECD, 2019). There are largely four types of urban regeneration applications in Busan: (1) sustainable regeneration on brownfield land; (2) the development of the waterfront area; (3) creating a new urbanism, a smart city; and (4) community-led (neighbourhood) regeneration.

Sustainable regeneration on brownfield land

Economic recession caused by industrial restructuring was the most important issue for the Busan Metropolitan City government. To revitalise local economy, the city government endeavoured to change the manufacturing industry into a service and knowledge-based industry. Brownfield lands and abandoned sites near the urban centre were a strategic asset for the city government to achieve such goals (Wong and B  ing, 2018, Raco and Henderson, 2006). It was relatively easy for the local government to implement mixed-use property-led urban regeneration on brownfield, since the

area did not have constraints for any large-scale construction process. The development of a brownfield site contributed to increase the local tax base, the asset value of the site and its adjacent areas, and to create diverse types of jobs as a method of a sustainable urban regeneration project. Three empirical case studies (in particular, Centum City) in this research is an epitome of this type of urban regeneration.

Development of waterfront area

The port is a symbol of the city of Busan. However, as the global port industry has been expanded, the port area in Busan, which consisted of old port facilities, had to be changed. Also, the adjacent area surrounding the old port, which was an urban centre of Busan, had declined and also needed to be revitalised. This required urban regeneration initiatives. Hence, the Busan Port Authority and Busan Metropolitan City government implemented the North Port Redevelopment Project – one of the three empirical cases in this research, in order to provide job opportunities, private investment opportunities, new urban infrastructure, eco-friendly waterfront and green space, and housings. As the western area of Busan, which is located around the old port, lags behind the eastern area of Busan, the large-scale urban regeneration will be able to balance between two areas as well as to create a new growth machine of the city.

Creating a new urbanism, a smart city

Urban regeneration aims to address urban problems. The concept of a smart city aims to resolve urban problems by using the latest technology such as information and communications technology (Ministry of Land Infrastructure and Transport, 2019). In this background, both concepts share the main aim. In Busan, as the concept of the fourth industrial revolution became famous, the idea of a smart city was also paid considerable attention by citizens as well as civil servants. Consequently, they decided to create a smart city within the city of Busan with the strong support of the national government, one of the three empirical cases in this research. As the national Smart City test bed, the smart city in Busan will be given

institutional, theoretical, technical and financial support for five years from 2019. Since the city government of Busan already implemented the U-City initiative, which aims to provide various ubiquitous city services and information to citizens anywhere and anytime through integrating urban infrastructure and ICT (OECD, 2019), since 2005, the local government has confidence to embed the idea of a smart city into the large-scale urban regeneration master plan successfully.

Community-led (neighbourhood) regeneration

As small-scale urban regenerations are emphasised, the Busan Metropolitan City government focused on the city context at first. Since Busan is one of two cities which was able to avoid severe destruction by the Korean War, there are a number of old housings and urban infrastructures which should be renewed. This brought about poor accessibility, a lack of public amenities and unemployment. As the youth left such old housings and urban facilities, the community had shrunk and consisted of the elderly only. Hence, both the central and local government made huge efforts to resolve such a vicious cycle under the name of the 'Urban Regeneration New Deal'. Experts, academia and professional consultants encouraged local residents to participate in community engagement during the delivery of regeneration programmes. The interventions usually focused on creating sustainable communities which could be maintained even though the initiatives were complete.

Conclusion

This chapter aims to investigate the context of South Korea and Busan regarding general information, urban issues, urban planning and urban regeneration before analysing three empirical case studies. The city of Busan has had multi-layered contexts through the urbanisation and industrialisation process over the last six decades. Based on its geographical location, the city of Busan was formed as a small harbour village as the first international trade area. Through

the Korean War, it became one of the most significant areas and the provisional capital of South Korea. Between the 1970s and the 1990s, it was developed as the first port city and the second largest city in South Korea. Due to rapid urbanisation, industrialisation and globalisation, Busan Metropolitan City was confronted with a number of urban challenges such as the increase of urban derelict areas, social inequity, heavy transportation, pollution, a global financial crisis, the new generation of industry and population.

Both the national and local government traditionally tended to approach such urban issues through a type of strategic spatial planning. Since the 2000s, in particular, the idea of urban regeneration and diverse types of urban regeneration programmes have hugely influenced the city of Busan. Furthermore, from the 1960s, South Koreans learned advanced technologies, policies and knowledge from developed countries and endeavoured to export even more evolved products on the basis of such original sources. This tendency also happened in urban policies. The city has been impacted by the international trend (policy and knowledge) such as its geographical location as a port city, the global financial crisis in 1997 and 2008, policies by governments and South Korean characteristics. Currently, governments are attempting to export and share a Korean-style urbanism such as a smart city to another context.

Thus, to achieve the objective of this research, exploring the development of urban regeneration with policy mobility over time, it is essential to examine the context of Busan as well as South Korea particularly concerning urban planning and urban regeneration. This led the author to articulate to what extent the local circumstance and resources should be scrutinised and be framed through the theoretical framework of policy mobility. In summary, the exploration of the overall local context, including a brief local history, the formation of the urban area, major urban issues, and urban planning policies with the idea of urban regeneration, dictated that the

following empirical chapters would focus on the following points: (1) the delivery process of specific large-scale projects rather than general urban planning; (2) the governance system through which such a project or programme is implemented; (3) urban regeneration policies, programmes or ideas regarding economic, environmental and social aspects which are circulated by such governance or actors engaged in the governance system and (4) the specific relationship among space, Acts and internal and external contexts surrounding policy mobility.

Chapter 5 Empirical Chapter 1: Centum City

Introduction

The main aim of this chapter is to frame the first large-scale urban regeneration project in Busan, South Korea through the lens of a policy mobility framework. This chapter will address the implementation of urban regeneration and the very first attempt of the knowledge and policy circulation process in Busan within the Centum City project.

In the 1990s, Busan was confronted with two main internal and external urban issues: deteriorating urban space and an economic crisis due to industrial restructuring. In the 1950s, after the Korean War, an influx of refugees moved into the city of Busan and this brought about several shanty towns in the urban space. Between the 1970s and the 1980s, due to industrialisation, the city of Busan urbanised rapidly. Diverse types of urban infrastructures such as public transportation facilities and public offices, private buildings and housings were constructed in Busan. However, in the 1990s, such constructions with the surrounding built environment became obsolete and they needed to be revitalised or newly created. The city of Busan also suffered a severe economic recession with industrial restructuring in the 1990s. Since the area of Busan was first formed as a small harbour village, the city has become famous as a port city focusing on the logistics and manufacturing industries. However, with the development of other global port cities, the amount of export decreased. Moreover, globalisation forced the city to focus on the upcoming next generation of industry, particularly concerning the provision of services. With the introduction of financial liberalisation and the development of a global financial market, the city of Busan had to survive against high global competition and was keen on recovering the urban economy and industries. The city desperately needed an opportunity to achieve such goals.

The advent of local autonomy coincidentally encouraged the Busan city government to be active in revitalising urban space, economy and industries. By the end of the 1980s, South Korea was a highly centralized government system due to the impacts of the military regime from the 1960s to the 1980s. During this period, the national government strictly managed and regulated policies and programmes through the grip of military power. Regarding urban planning, the national government usually attempted to focus on constructing urban infrastructure and fulfilling housing demands in order to recover the aftereffects of the Korean War in the 1950s. Since most urban areas were destroyed and derelict, people believed that such a top-down process was quite efficient and effective to rebuild urban areas as well as urban societies. In 1993, however, the first civilian government was arguably established by Young-sam Kim, the 14th president of South Korea. The president determined the actual beginning of local autonomy in 1995 (the city mayor²⁵ was elected). Due to the implementation of local autonomy, the authority (termed 'power' in policy transfer literatures) for policy making transferred from central government to local government. Busan city government became a relatively independent policy maker concerning urban planning issues relative to the role of the local government in the past.

In this context, Busan Metropolitan City focused on an urban regeneration project as a silver bullet to revitalise the local economy and derelict urban areas, aiming to create a new urban centre with the development of a new generation of industries. According to Smyth (2005), large-scale urban regeneration acts not only as a facilitator of reinvigorating derelict urban areas but also as a designer

²⁵ Since 1995, the mayor of the city in South Korea has played a significant role in governing the local area. Based on authority over human resources and municipal budget, the city mayor takes control of a local government. The local government consists of the main head office, city council, government funded bodies (e.g. Transportation Corporation, Development Institute), and headquarters (e.g. construction headquarters, waterworks headquarters). Also, since the mayor of the city can spend the special grant for local areas, even politicians should obey the mayor's opinion in order to secure enough funding for their local constituencies. As the second largest city, the mayor of Busan has absolute power without any restraint of the central government, particularly in 1995.

for the city branding. Civil servants and politicians in Busan were keen to transform the city into a more attractive and charming place where the public would like to visit, and private firms would like to invest. By attracting such new investment from firms, they believed that they could create a high-tech city surrounded by service industries (accounting, restaurant, tourism, etc.) through the large-scale urban regeneration project. Thus, the local government investigated and explored an appropriate area to be redeveloped and chose a former military airport with a container yard, which was located in the urban centre but was an abandoned area. This was the very start of Centum City²⁶ (previously, Suyeong Information Complex).

Before the implementation of Centum City, developers (civil servants, politicians and urban planners in Busan) did not have any experience of working on a large-scale urban regeneration project. Although they were familiar with the idea of urban regeneration which became popular in the 1990s and was internationally circulated (Smyth, 2005, Smith and Garcia Ferrari, 2012, Marshall, 2004), they did not have actual in-depth knowledge about it. It was necessary for them to collect case studies and best practices regarding urban regeneration from other countries and cities through web searching, field trips and business meetings. Consequently, the developers of Centum City partly decided to refer to some ideas and knowledge from Minato Mirai 21, Yokohama, Japan.

As Centum City resulted in a group of new constructions including shopping centres, an exhibition hall, hotels and urban infrastructure with an increased number of visitors, Centum City may be considered as a successful project for now. However, there have also been critical perspectives. There was a long account with three phases (Table 5-1) about the delivery process of Centum City.

²⁶ It was initially started in the name of 'Suyeong Information Complex'. It was changed into 'Centum City' when the project was restarted by the announce of the mayor of Busan after the financial crisis from 1997.

Foremost, the project was begun with a strategic planning focusing on the economic sustainability idea, by suggesting the next generation of industrial cluster even though such a suggestion was not implemented successfully.

We conceptualised the new urban regeneration project (Centum City) as ‘a combination of Humanity, Nature, and Technology’. The meanings were that humanity stands for securing social equality without any disparity; nature stands for an eco-friendly urban infrastructure; and technology stands for an economic infrastructure (new industry) for the next generation. Although we did not have a clear plan at that time, I believe that the concept we established showed the direction of the regeneration and supported creation of a strategic planning (Interview with former officer of Development Administrative Management Bureau of Busan Metropolitan City, 2018). [code²⁷: local context – economic, environmental and community issue]

However, due to the withdrawal of the largest investor, SK group, the strategic planning was almost cancelled and completely modified. For instance, the Busan city government learned the Public Private Partnership (PPP) system from Minato Mirai 21, and adopted it on to the project. As a result, the Centum City Corporation was established. It was expected that the Centum City Corporation would be effective in supervising the urban regeneration project. However, the withdrawal of SK group, a half part of the PPP members, diminished the power, which impacts on the policy making process, of the PPP system. Consequently, the PPP system did not work in

²⁷ In empirical chapters, the author adds references to interviews which would support the point he is making. This shows that the analysis within the chapters is supported by the empirical research.

the context of Busan whilst it has worked well so far in Minato Mirai 21, Yokohama.

	Activities
1994. 02.	<i>Decision made for the development of Suyeong Information Complex</i>
1996. 04.	Purchasing land with Ministry of National Defense
1997. 01.	Establishment of Suyeong Information Complex Development Corporation
1997. 03.	Designated the project area as a local industry district
1997. 12.	<i>SK Corp. announced withdrawal of its investment in the development project</i>
1998. 10.	<i>The second mayor of Busan, announced the city would resume the Centum City project</i>
1999. 04.	Hiring Dames & Moore consortium as a project manager team
1999. 12.	Confirmation of master planning
2000. 5.	Change of project name to 'Centum City'
2000. 11.	Beginning construction of the infrastructure
2002. 04.	Designated the Centum City project area as the Special Tourist Zone Building Centum Venture Town completed
2005. 10.	APEC Naru Park construction completed
2005. 11.	Building infrastructure completed
2007. 06.	Centum City project completed

Table 5-1 A timeline of the Centum City development process in Busan, South Korea
(Source: Busan Metropolitan City)

After a period of threats and challenges (and the change of the project name from Suyeong Information Complex to Centum City at this stage), Busan Metropolitan City government, which took on the role of main developer and investor, managed a series of contextually-modified planning processes: mainly focusing on changing the original strategic planning with deregulation; selling the ownership of the land in the development area with diverse attractive marketing strategies; creating Centum Venture Town to become a media and film industrial cluster; and suggesting environmentally sustainable approaches in the built environment. By using the local periodic mega event, Busan International Film Festival, and a new type of governance system (the project management framework hired a global professional urban planner, Dames & Moore Group²⁸)

²⁸ Dames & Moore Group was founded in 1938 and engaged in providing engineering, consulting, and construction management services. The firm specialised in a variety of civil engineering, transportation planning and design, and construction disciplines by providing governments (or corporates) with consulting services. Roughly 14% of Dames & Moore's revenues are derived from government projects. The consulting company was acquired by URS Corporation on 1999, which was also acquired by AECOM in 2014.

behind the PPP in the South Korean context, a series of contextually-modified planning was able to replace the initial strategic planning. With the successful completion of the project in 2007, the Centum City model has been exported to other countries and cities.

Centum City was the first urban regeneration project of which there has never been any such precedents implemented in South Korean urban planning history. Thus, it was delivered based on case studies from other contexts. This research will interpret the project through the lens of a policy mobility framework. By focusing on the interaction between international ideas and the local context, the framework can explore the question of how the first large scale urban regeneration project in Busan was implemented in detail. Furthermore, it will also describe how global ideas were applied in the project and how it developed in the local area. Thus, this chapter will discuss the process of delivering the Centum City project, assuming that there was a slight policy mobility process which was cancelled, reduced and modified throughout the dynamically changing delivery process of urban regeneration. The following part will eventually illustrate the background of the first large scale urban regeneration project in Busan by examining the three phases: Strategic planning: the beginning of knowledge and policy circulation (1994-1999); Threats & Challenges: the interruption of local context against policy mobility process (1997-2000); and Contextually modified planning: modified and contracted policy mobility (2001-2006).

Background: Unintended preparation for policy mobility

Since the 1990s, Busan Metropolitan City experienced a huge change within geographical, political and global contexts. Foremost, the city had deteriorated due to the industrial restructuring. Secondly, the South Korean government adopted the local autonomy system which provided the city of Busan with authority in the local policy making process. Lastly, the increased and quicker competition within globalisation promoted Busan Metropolitan City to be redeveloped.

These changes motivated both the South Korean government and the local government to learn and follow global trends or best practices regarding urban regeneration schemes. This research interprets such changes within geographical, political and economic contexts as an unintended preparation for policy mobility.

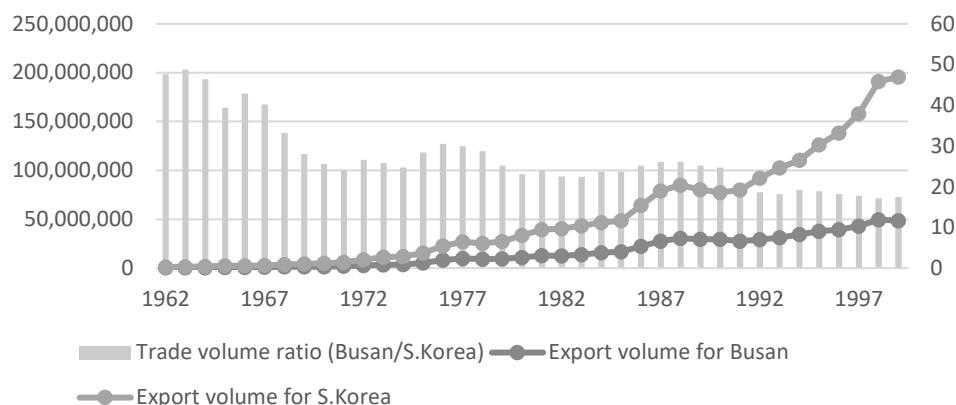


Figure 5-1 Trade/Export volume ratio of Busan and South Korea (Source: Busan Metropolitan City; revised by author)

Between the 1960s and 1970s, South Korea developed dramatically through export-led industrialization. In this context, as a major port city in South Korea, the city of Busan was also growing significantly (Figure 5-1). The city was famous for its port and logistics industry, accounting for approximately 50% of the South Korean trade volume in 1970s (Jung, 2014). Such industries were one of the major growth engines in Busan. Low value-added and labour-intensive industries (textile and shoe industries) also rapidly developed in this period. However, in 1990s, local companies (small and medium enterprises) in such fields moved to adjacent areas of Busan – Gimhae²⁹ and Yangsan, to find much cheaper labour forces. Consequently, in 1995, the trade volume of the city of Busan accounted for only 15% of the total trade volume in South Korea (Jung, 2016). The weakness of the competitiveness of conventional local industries contributed to

²⁹ Gimhae and Yangsan are cities in South Gyeongsang Province, South Korea near Busan Metropolitan City.

the decline in the employment rate for young people in Busan Metropolitan City. This resulted in a decrease in the population of Busan, lack of public services and concomitantly an increase in urban derelict spaces.

Regarding the political context, local autonomy was established in 1995, allowing Busan to go beyond the central government's authorisation. From 1961 to 1987, South Korea was ruled by a military dictatorship, under former presidents Chung-hee Park (the 3rd president of South Korea) and Doo-hwan Chun (the 5th president of South Korea). However, at the end of the 1980s, after a long-lasting military dictatorship, South Korean citizens were keen on democratising their society. Such democratic movement in South Korea facilitated local autonomy in 1995. Under the process of local autonomy, local governments and local councils were able to create urban policies (programmes) for the local area and to use the local budget without the interference of the central government. This change had significant implications for the policy making process because previously, such activities were strictly limited under the centralised authorisation, particularly the military dictatorship.

The advent of globalisation also impacted on Busan. In the late 20th century, several major global issues (e.g. development of transportation and communications technology, General Agreement on Tariffs and Trade at the Uruguay Round, and the advent of the World Trade Organization) brought about an increase in global economic transactions and cultural exchanges. Such circumstances accelerated globalisation and international competition. The South Korean government endeavoured to enhance the competitiveness of local areas by attracting global investors and visitors. For instance, the central government supported Busan Metropolitan City to host several mega-events: the Asian games, APEC Economic Leaders' Meetings and Busan International Film Festival (BIFF). Mega-events have become one of the most significant elements in developing decayed urban areas as a strategy for urban regeneration which took

place as a part of the transition from an industrial society to a post-modern society (Graham and Healey, 1999). The mayor of Busan, civil servants and politicians in Busan were keen to use the mega-events as catalysts for the revitalisation of derelict urban space.

Such changes in the background context occurred simultaneously but unintentionally. The derelict spaces in Busan, created by industrial restructure, needed an urban regeneration. The change in the governance system, the advent of local autonomy, provided civil servants and politicians in Busan Metropolitan City with proper authorisation for the urban regeneration. Furthermore, the increase of global competitiveness particularly due to globalisation fuelled the local government's willingness regarding the urban redevelopment. However, Busan Metropolitan City government did not want to concentrate on a one-off global mega event. In addition to such events which only have a temporary effect on the urban area, the city government sought to invest a huge budget on redeveloping the city in order to maintain a constant stimulus on urban economy in a positive way. At that time, telecommunication technology was dramatically developing and became a sensational issue in South Korea. The central government planned to invest in the next generation, a regional research centre, and software incubator. In this context, the city government of Busan decided to focus on creating an industrial park within the urban regeneration plan, which was to become the agglomeration space of high-tech telecommunication firms.

The lens of a policy mobility framework interprets the above background as an unintended preparation for knowledge and policy circulation process. The Busan Metropolitan City government had to take action in order to revitalise derelict urban spaces. In this context, 'international competition' promoted the Busan Metropolitan City government to begin considering the implementation of urban regeneration by creating a new generation industry cluster. Through the advent of globalisation and a capitalist society, more and more

countries and cities endeavoured to adopt broadly similar investor-friendly policies and programmes (Marsh and Sharman, 2009). The city government of Busan attempted to win the global competition by following the global trend. The movement of power (the change of the role) within the policy making process (Allen and Cochrane, 2007) as a result of local autonomy in South Korea, also became a good chance to mobilise knowledge and policy from across the world. Although the power is still embedded in particular people and institutions, the movement of power indirectly encouraged the local civil servants to learn global knowledge and policy. In detail, the implementation of an urban regeneration project was a very new approach for local civil servants. They were keen to proceed with the urban regeneration without any risks, and following a global trend was a good opportunity for them to follow in order to reduce such risks.

Consequently, the external condition, the increase in global competitiveness, unintendedly urged the Busan Metropolitan City government to focus on urban regeneration and the internal condition, the deterioration of urban spaces and the advent of local autonomy, which accelerated the city government to learn and follow global knowledge and policy. The following part will investigate and discuss detailed information of the knowledge and policy circulation process.

Strategic planning: the beginning of knowledge and policy circulation (1994-1999)

Traditionally, the policy making process for urban planning in South Korea has been implemented by a top-down (particularly central government-led) approach. This meant that the implementation of urban planning in Busan before 1995 was usually determined by the central government.

At that time, we (civil servants in Busan Metropolitan City) made all decisions regarding urban planning issues in Busan. We didn't even imagine that citizens would make complaints against us. In other words, we had a powerful authority regarding development of the urban area and we believed that we had enough capacity to do so (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: local context – political issue]

However, from the 1990s, Busan Metropolitan City attempted to implement an urban planning project autonomously due to the implications of the national economic crisis, industrial restructuring and the establishment of local autonomy. Based on these circumstances that were regarded as the unintended preparation of knowledge and policy circulation at the beginning of the Suyeong Information Complex project, the information of global imaginaries or lessons were collected and investigated by a newly authorised actor (a combination of civil servants in Busan Metropolitan City government and SK group, a large-scale private firm). This actor, in particular, played a role as an incoming policy consultant even though the circulation process was not completed. At this stage, the circuits of knowledge and policy process were dependent on the interpersonal interactions which discussed policy transfer framework.

Jung-soo Moon, the mayor of Busan who was firstly elected by popular vote, made the decision to develop a brownfield located in the urban centre. Civil servants and politicians also recognised the large abandoned area in the urban centre and believed that the development of such an empty area would be a panacea to resolve several challenges that Busan was facing at that time: (1) developing the next generation of industries; (2) establishing an urban high-tech industrial complex; (3) revitalising the local economy and the underdeveloped urban centre.



Figure 5-2 The past and present of Suyeong Information Complex – Centum City (source: Busan Metropolitan City)

The abandoned brownfield was used as a former military airport (named Suyeong International Airport, Figure 5-2), which was a forgotten place for Busan citizens even though it was located in the urban centre, near the waterfront area (alongside Suyeong River). It was developed by the Japanese government during the end of the 1940s to transport military supplies in preparation for a war against China when Korea was under Japanese colonial rule. After the independence of South Korea, it was protected as a military reservation district and development restriction zone. The place became a brownfield when the flight facilities were transferred to a new city airport (far west of the city of Busan), Gimhae International Airport in 1970s. The Ministry of National Defence, the landowner of the empty space, leased the land to private firms temporarily. At that time, the place was used as a container yard or a space of public protest against military dictatorship.

Under the military regime, civil servants could not suggest any development plans for the empty space, previously used as the ‘Suyeong International airport’. However, when the first civilian government was established, the local government began to discuss the development of the abandoned

brownfield. In particular, the elected mayor of Busan was extremely keen to proceed with the project in order to revitalise the previous urban centre (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: local context – political and community issue]

There was a leader who approved the development plan (the mayor of Busan), planners who had enough willingness (civil servants and urban planners), and a landowner who had a positive opinion to sell the land (Ministry of National Defence). However, the most significant factor to accomplish the regeneration project was missing: enough funds. The only way to secure funds for the regeneration project was using the municipal budget through the transfer of the general account to the special account and attracting private firms to invest in the project.

Busan Metropolitan City was only able to use the special account for an urban development project. If the city government spent a budget under the name of general account, it was necessary to be recovered with precise outcomes. However, in terms of the special account, civil servants were enabled to use it in diverse ways with no restrictions. However, Busan Metropolitan City government did not have enough funds in the special account. So, it is no longer possible these days, civil servants who had responsibility for the development attempted to transfer the general account to special account at first. It could be recorded as a ‘borrowing from the general account’. Then, when they made revenues from the special account, they planned to pay the outcomes back to the general account through the transfer of the special account to general account. To avoid unnecessary parliamentary inspection of

the administration, such a payback plan was essential (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [local context – economic and political issue]

To secure a large amount of funding within the municipal budget, a precise, promising and detailed plan was required at the initial stage of the urban regeneration project. Furthermore, as an actor, newly authorised by the advent of local economy, civil servants attempted to avoid any possible risks and a type of responsibility regarding urban regeneration under their authorisation. Hence, learning and referring to the best examples, practices and programmes regarding urban regeneration across the world was a proper approach for civil servants. Lack of experience regarding the implementation of such a large-scale urban regeneration project also promoted civil servants, urban planners, academia and engineers to suggest referring to such global imaginaries and examples.

Everything was new for us (Busan Metropolitan City government). We were given the task of developing a large urban centre brownfield by ourselves. Throughout every moment of the development, we endeavoured so that the project would not be withdrawn. To do so, we had to investigate and focus on successful similar projects around the world (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: circulation of idea – key actors, best example (urban development model) / local context – political issue]

Although the implications of globalisation and industrialisation developed a macro-level idea into a pattern of increasing similarity in economic, social and political organisation between countries (Stone, 2004), McFarlane (2011) asserts that learning is a process of potential transformation. To restructure the industries and urban areas of the city of Busan, the local administration decided to create

a 'high-tech industrial complex' by following global knowledge and practices. Civil servants suggested the idea of 'Teleport' as the next generation of urban model in Busan and planned to create a world leading city focusing on the high-technology telecommunication industry.

The idea of 'Teleport' (& High-tech industrial complex)

With the increase of telecommunication usage at the end of the 20th century, the USA and Russia, two of the most developed countries in the world at the time, realised that they needed to build a high-technology system, a so-called 'Teleport'³⁰. Since the system needs large scale facilities and space, developed countries planned to build a new urban area based on such high technology industries. The Busan city government believed that the city needed a new industrial cluster which would be a new growth machine for the city and a new urban area which might replace the derelict urban space. Furthermore, the city government expected that the local administration should prepare for rising telecommunication usage by establishing local area networking equipment, electronic mailbox systems, multiple-client word process and data processing configurations. In this context, such a high technology and knowledge-intensive industry was attractive to politicians, civil servants and urban planners in Busan.

In order to create a global city, cities need to build three ports: airport, seaport and teleport. At that time, the mayor of Busan was keen on establishing a high-end teleport in the urban centre. Civil servants in Busan Metropolitan City believed that the teleport would contribute to an increase in job opportunities (and to the improvement of economic condition) for

³⁰ The idea of teleport has been described most commonly as 'a satellite antenna farm set in a frequency-interference-free area and linked by a fibre optic cable to a metropolitan area' (Larios, 1985, p.1)

local residents. Also, since there were only two cities (Moscow, Russia and New York, U.S.) which were interested in creating teleports, it was considered to be a good opportunity for civil servants to identify a specific character of the city of Busan through the establishment of a new city image (in the urban area) (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: circulation of idea – key actors and new concept of urbanism]

Important factors of the teleport were connected with labour pools near the local area: accessibility from major highways, proximity to the urban centre and availability for urban development. Civil servants and politicians in the city of Busan believed that the circumstance of the empty space in Busan Metropolitan City, a former military airport near the urban centre, perfectly matched such conditions of a teleport so they decided to adapt the idea into the local area. In this context, New York's teleport city was a role model for Busan. Busan Metropolitan City government believed that Busan might become a global leading city in the field of high-speed telecommunication networks if the city could take the advantageous position first.

SK group, currently one of the tenth largest conglomerates in South Korea, was interested in the aim of Busan Metropolitan City. In the early 1990s, the developing firm attempted to become a leading common carrier in the field of information technology by focusing on telecommunication, wireless telecommunication service, and integrated multi-media. Also, due to the development of telecommunication technology (in particular, Fibre to The Curb³¹), the firm concentrated on the high-speed telecommunication service,

³¹ Fibre to the curb refers to the installation and use of optical fibre cable directly to curbs near homes or businesses. Fibre to the curb is designed as a replacement for the plain old telephone service. The basic idea of fibre to curb technology is that suitable wires can carry high-speed signals at short distances BAGAD 2009. *Optical Fiber Communications*, Technical Publications..

satellite business and electronic commerce. Based on this context, the firm had ambitious plans to dominate the distribution industry in the future. The local government's new project was a good opportunity for the SK group to achieve its aim. The corporation could expand its business capability along with the project, officially supported by the city government legitimately and institutionally. In 1995, Jung-soo Moon, the mayor of Busan, and Jong-hyun Choi, the Chief Executive Officer of SK group, made an agreement to redevelop the former military airport area. SK group became the main actor of the project and the largest shareholder of Centum City Corporation, owning about 51%. The firm was fully responsible for establishing and managing the urban infrastructure through the project.

Unfortunately, this plan could not be implemented since the concept of teleport became useless due to the rapid development of telecommunication technology. The city governments of both New York and Moscow also withdrew the plan to create a 'teleport city', because citizens could use the Internet unlimitedly without data processing facilities. Since the idea of 'teleport' was not circulated, it might be considered as a meaningless point within the Suyeong Information Complex project. However, as the idea was used as a legacy a few years later (when Busan Metropolitan City government paid attention to a 'smart city' in the 2010s), it is meaningful enough under the lens of a policy mobility framework. This will be discussed further in the last empirical chapter of this thesis.

Although the Teleport city project was cancelled, it was a meaningful starting point for Busan Metropolitan City government. The city government began to consider the industrial restructuring and setting up the image of Busan Metropolitan City's future. Also, through the field trip across the world including New York, U.S., civil servants expanded their perspectives and possibilities regarding urban

planning. Looking at the results, such consideration became a legacy in the field of urban planning of Busan. Current civil servants could approach the idea of a smart city, one of the hottest urban agendas these days, without any hesitation since they experienced a similar type of urban regeneration scheme (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: circulation of idea – legacy from the past / local context – economic issue]

Flagship development (property-led regeneration)

As the concept of teleport was cancelled, the Busan Metropolitan City government needed to seek a new direction for urban regeneration. The local government tended to maintain the aim of creating a high-tech industrial complex focusing on tertiary industries such as tourism and media industries. Moreover, the city government sought to develop the empty urban area with highly developed technologies and an attractive city image which had never been experienced before in Busan. Thus, the city government of Busan concentrated on flagship development, usually based on property-led regeneration. Since the 1980s, flagship development³² focusing on property-led regeneration became the dominant local strategy globally because it led cities to put a great deal of effort into the physical transformation of derelict spaces. This effort also contributed to the transformation of local economies (Healey, 1995). Busan city government also followed such a leading global trend.

In this circumstance, the city of Busan conceptualised the newly created urban centre as an urban high-tech industrial complex

³² Flagship development defined as 'high profile developments that play an influential and catalytic role in urban regeneration, which can be justified if they attract other investment' SMYTH, H. 2005. *Marketing the City: The role of flagship developments in Urban Regeneration*, London, E & FN Spon.. The aim of a flagship is to develop the physical revitalization and the economic and policy base of the urban area.

including Information Technology (IT), film and media, global business, commercial, residential, tourism, entertainment, and exhibition. This plan was named the ‘Suyeong Information Complex Project’, one of three ‘millennium projects’³³ organized by the Busan Metropolitan City government.

The city of Busan has aged. Not only regarding societal issues in the urban area, but the cityscape has also decayed. Something special was needed. Something that could attract tourists as well as developers for the new city. In the 1990s, we (civil servants in Busan Metropolitan City) focused on the brownfield and believed that it could be developed as a symbol of the city of Busan (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: local context – community and economic issue]

Through the flagship development, civil servants and politicians expected that the regeneration project area would become an innovation district for the promotion of information and technology as well as the cultural industry. Since the Suyeong Information Complex was the very first large-scale regeneration project in South Korea, focused on marketing the city, civil servants had no experience regarding how to proceed, manage and maintain the project. To implement the project strategically, the city government endeavoured to follow the best example from other countries, especially focusing on Minato Mirai 21, Yokohama, Japan.

The city of Yokohama has been the first port-city in Japan since 1859 when the port of Yokohama opened. As a result of World War II, Yokohama port facilities were severely destroyed, and a number of urban problems emerged. In the mid-1960s in particular, the population of the city was growing at a rate of 100,000 people per

³³ Suyeong Information Complex project, Western Busan Distribution Complex project, Eastern Busan Tourist Complex Development project

year and the city suffered from a lack of infrastructure and green space. Thus, in 1964, a 'Yokohama City Centre Plan Concept Proposal' was drawn up by the mayor of Yokohama specifically outlining six major projects including the Yokohama City Centre Redevelopment Project. Since Yokohama's city centre was largely divided into two areas (the North, a strong transportation hub linked to Tokyo with rail lines, and the South, a centre for business and local government), the redevelopment project aimed to consolidate and integrate the two areas through building the various functions of offices, cultural facilities and commercial establishments in these areas. The project was officially named Minato Mirai 21, which means the future port of the 21st century, in 1981 (Figure 5-3). Minato Mirai 21 included 73.9 hectares of reclaimed land out of a total of 186 hectares. The rail yards and port facilities were moved out and urban infrastructures such as roads, public facilities and parks were developed (Blakeney et al., 2012).



Figure 5-3 The Minato Mirai 21 project, Yokohama, Japan (before and after) (source: MM21 Corporation)

Since the geographical and economic circumstances of Yokohama were quite similar to that of Busan, it was the best practice to refer to for the Busan city government civil servants.

Many foreign civil servants including those from Busan Metropolitan City and other South Korean local governments visited this office and shared

experiences and knowledge regarding the delivery of large-scale urban regeneration projects (Itaru, 2017). [code: circulation of idea – key actors, their relationships and concept of new urbanism]

However, on behalf of the city government, a legitimate group as a consignment company was necessary since the local government could not spend and invest a huge amount of funding on profitable businesses. Thus, Busan Metropolitan City government emulated the Japanese case's governance system, a public private partnership (PPP), which could be interpreted as a 'lesson' from Minato Mirai 21. Civil servants found that the PPP was an effective system to implement the flagship regeneration project: to increase market efficiency by proper allocation of risk; to complete projects on time and within budget; to reduce maintenance costs; to increase foreign investment in the country and to provide a better quality of services.

Established in 1984, Yokohama Minato Mirai 21 Corporation (the name of the Public Private Partnership) became one of the main actors of the project. In particular, Yokohama Minato Mirai 21 Corporation played a role as the secretariat for the Town Development Council. For instance, the Minato Mirai 21 Corporation made the Basic Agreement on Town Development signed by landowners in 1988. This agreement was designed to ensure that the development of the area was balanced and that landowners maximized their returns on investments by developing an attractive, co-ordinated district. It was responsible for the implementation of decisions made from discussions of issues involving approval of buildings and structures, advertising signs and other facilities. It also managed various facilities located in the Minato Mira 21 project. As an 'incoming policy consultant' mentioned in policy transfer framework (McCann, 2011), Busan Metropolitan City government and SK group imparted the PPP as a new type of governance system which had not been seen in South Korea, which could be termed a 'lesson' (Rose, 1991), from Minato Mirai 21, Yokohama.

Busan Metropolitan City government and nine other private firms³⁴, thus, created Suyeong Information Complex Corporation in 1997 as the Public Private Partnership, investing six billion Korean *won*. Owning 25% of shares, SK group became the largest shareholder of the corporation. The corporation consisted of 20 employees from private firms and the local government who were organized into three groups – marketing, management and maintenance, and the technical department. The corporation had responsibility over the overall project, playing roles such as managing the development plan, dealing with financial issues, and being in charge of maintenance of the development sites by making contracts with private firms.

There were arguably other ‘lessons’ that circulated from Yokohama to Busan. Minato Mirai 21 Corporation focused on conserving the natural environment surrounded by large scale construction. The Minato Mirai 21 project was famous for achieving the idea of sustainability successfully during the economic bubble era (Minato Mirai 21 Promotion Division, 2016). Due to the environmental approach in Minato Mirai 21, civil servants and Busan citizens also urged the corporation to focus on securing enough eco-friendly areas within the development site. Thus, Suyeong Information Complex Corporation established the main slogan of the project: ‘a small town in the urban centre combining humanity, nature and technology’. More specifically, the corporation suggested three environmental ideas within the master plan: river walk, community port and central park, which the local authority finally confirmed in 1999 (Choi, 2006). Furthermore, Suyeong Information Complex Corporation realised that strict guidelines make the plan more sustainable in terms of economic and environmental aspects. Thus, Suyeong Information Complex Corporation divided the project area into four zones to prevent urban sprawl and to setup specific regulations by zone (Figure 5-4) as Yokohama Minato Mirai 21 Corporation did in the

³⁴ Except SK group. It was excluded in 1997.

Minato Mirai 21 masterplan. The four zones were: (1) Digital Media Zone, creating a high-tech industrial complex; (2) Urban Entertainment Centre, attracting tourists and visitors; (3) International Business Centre and Busan Exhibition & Convention Centre, improving local industry through sharing advanced information and high-quality human resources; and (4) Mixed Use District, focusing on establishing commercial and residential purposed facilities.



Figure 5-4 Strategic planning in MM21 (Up) and Suyeong Information Complex (Down)
(Source: MM21 Corporation, Busan Metropolitan City and author)

As the very starting point of Suyeong Information Complex project, policy mobility happened. In particular, globalisation accelerated to form an 'international competition' circumstance. To win the competition, civil servants in Busan and SK group, playing a role of 'incoming policy consultant', endeavoured to learn and apply an idea of 'teleport' and 'flagship development (property-led regeneration)',

as 'global imaginaries' or 'lessons' from another context. This would have been impossible if the local autonomy had not been introduced during this period. The local economy, which means that the power which impacts on policy making process, provided civil servants in Busan with an authority for policy making. Moreover, it softened a rigid governance system in South Korea so that the local government could approach foreign contexts easily through field trips and business meetings.

Threats & Challenges: the interruption of local context against policy mobility (1997-2000)

The strategically planned project was not implemented as was expected. In particular, the local context impacted on the policy mobility process significantly. *Inter alia*, unexpected situations regarding financial issues (e.g. the economic crisis in 1997, the withdrawal of the largest investor of the project, and steeply increasing debt) severely hampered the knowledge and policy circulation as well as the delivery of the Suyeong Information Complex project.

With the implications of the Games of the XXIV Olympiad (the 1988 Summer Olympics in Seoul), the South Korean government was enjoying an unprecedented economic boom by the early 1990s. Due to the economic bubble in Japan from 1986 to 1991, South Korea achieved a strong position in export markets. To strengthen the competitiveness of the country, the South Korean government concentrated on the expansion of the amount of exports by making use of such positive market circumstances. Through the export-led growth approach, South Korea joined the Organisation for Economic Co-operation and Development (OECD) and per capita income had topped \$10,000 dollars in 1995. The South Korean government did not have enough capital, so the national government intended to increase the inflow of foreign capitals. This policy also accelerated the increase of export volume.

Yet the increase of export volume simultaneously led to a revaluation of Korean currency in the middle of 1996 and the revaluation resulted in the depreciation of the Korean *won*. Young-sam Kim's administration, the second president to be elected by popular vote, tried to boost the administration's outcome, the increased export volume. To keep the higher export volume, the South Korean government had to maintain the depreciation of Korean *won* through artificial means, spending the national foreign reserves. Globalization in the 1990s introduced the development of financial liberalization and financial markets. The Asian debtor countries such as Thailand, Malaysia, Philippines and Indonesia encountered a foreign exchange crisis because they were unable to redeem foreign loans. This circumstance impacted on Korean society because the South Korean government also granted South Asian countries a loan. Technically, the South Korean government did not hold enough foreign-exchange reserves.

Furthermore, the corruption related to the son of the president of South Korea aggravated the economic crisis. The president's son forced high-street banks to deregulate the guidelines for business loans and to grant a few large firms by using his father's (the president's) name. This brought about rising inflation. These caused a significant currency crisis. A number of companies went bankrupt and countless number of employees were dismissed. Consequently, in 1997, the South Korean government announced that the country had made an application to the International Monetary Fund (IMF) for financial support.

Such a context had a significant impact on the Suyeong Information Complex project. There were no direct interruptions on the regeneration project by IMF, but it definitely prevented the city government of Busan as well as the South Korean government from making a huge investment in the project. Newly constructed residential buildings were not sold, and many construction firms went

bankrupt under the period of IMF supervision. The city government could not encourage developers to supply new housings.

The IMF hugely impacted the South Korean economic status in the 1990s. A number of private firms were shut down due to skyrocketing debts. Even the government couldn't motivate firms to invest in projects (Choi, 2006). [code: local context – economic issue]

During this period, the knowledge and policy circulation happened by 'global forces' (Peck and Theodore, 2010), a strong state and organisation such as IMF, under the name of 'coercion' (Marsh and Sharman, 2009). However, ironically, in the Suyeong Information Complex project, the knowledge and policy circulation process was interrupted by another type of knowledge and policy circulation, probably restrictions by IMF.

The reduction of overall tax revenues caused a budget cut for the following year. This forced Busan Metropolitan City government to reduce investment in building engineering constructions under the name of social overhead capital³⁵. It was inevitable, in particular, to postpone or to downscale the large-scale regeneration project. Although Busan city government motivated private firms to invest and to focus on creating the information technology industry (through a high-tech industry complex) to tackle the economic crisis by announcing the 'Cyber Korea 21' plan (Yang, 2003) such an attempt could not prevent the flagship regeneration project, the Suyeong Information Complex, from being delayed.

Two months after the implementation of the Suyeong Information Complex development, SK group, the biggest investor, abruptly decided to withdraw from the project. From Busan Metropolitan

³⁵ Social Overhead Capital (SOC) is the social capital mainly owned by the government that is the basic facilities and services needed for the functioning of a community or society, such as transportation (roads), education and health (schools, public libraries, and hospitals), communications and utilities (telephones, water, electricity), etc.

City's perspective, the largest investor's withdrawal had a significant impact. A deputy mayor attempted to solve the issue through consultations with the SK group vice president, but it was not successful at all. Civil servants argued that the firm's decision was irresponsible. Through the SK group's internal investigation, the firm expected that it would be impossible to create the high quality 'Teleport city', which required a huge amount of investment, because of poor economic circumstances which failed to attract foreign companies' investment or funding in the short term. Although the large private firm faced being charged a penalty for withdrawal, it was quite stubborn.

In my opinion, I, as a role of main contractor, felt that SK Group anticipated the foreign exchange crisis in advance. As one of the ten largest groups in South Korea, it had a great financial consultant team which was good at analysing domestic and foreign circumstances regarding politics and economics. I believed that the team strongly recommended the group should withdraw from the risky flagship project to avoid risks following the unprecedented economic crisis. Regardless of the local government's support, the corporation thought that a huge investment in the large-scale urban regeneration project could be a big challenge (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: local context – economic and political issue]

Furthermore, the stock sharing system for the Suyeong Information Complex was also problematic for the SK group. Stock sharing is directly connected with the authority in the policy making process. SK group was keen to be the largest shareholder, more than 50%, to be able to lead the direction throughout the delivery of the urban regeneration project. However, as an assessor, Busan Metropolitan

Council strongly claimed that SK group held too much authority in the regeneration project, owning more than 50 % of shares. Since both the large firm and the local government, estimated 25%, holding the majority of shares, it had the potential in limiting the city government from creating the Information and Technology Complex through the property-led urban regeneration project as planned initially. In fact, the SK group held only 49 % of shares, which means the corporation could not make a decision without permission from other shareholders.

At that time, SK did not want to invest in such a high-risk project. However, the practical reason for the withdrawal was that the firm could not manage the project since the share of SK was not enough for making a decision (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: local context – political and economic issue]

Consequently, the SK group's withdrawal from the project brought about significant financial challenges in the plan of Busan Metropolitan City. Furthermore, the change of main actors directly impacted on the mobilisation process. Since SK group worked as an 'incoming policy consultant' by guaranteeing a huge amount of investment, the withdrawal of SK group meant the disappearance of a 'powerful' actor and the pause (or almost cancellation) of the knowledge and policy mobilisation process.

The withdrawal of SK group also meant that the role of the governance system which managed the Suyeong Information Complex project was changed. The Suyeong Information Complex project was the very first project operated by a PPP in South Korea and Busan city government had expected that the regeneration project would be a cornerstone in South Korea as a successful cooperation between public sector and private sector. However, the

PPP system in Suyeong Information Complex worked a bit differently compared to traditional PPP systems in other countries.

Regarding Minato Mirai 21, Minato Mirai 21 Corporation had played a pivotal role in the project by fund-raising, making a contract (properties or land), managing contractors' complaints, and establishing strategic plans for the future. Since the corporation operated autonomously, it did not have to depend on shareholders and had administrative authorisation to make decisions independently (Itaru, 2017). This encouraged the employees of the corporation to take on responsibility and do their best in maintaining the regeneration project successfully in the long term.

One of the strengths of Minato Mirai 21 was that it was fully managed by Minato Mirai 21 Corporation. In particular, because the organisation is independent from a state-led governance system, Minato Mirai 21 Corporation had full authority to make its own decisions regarding fund management, land sale status and land usage (Itaru, 2017). [code: circulation of idea – institutions, regulations and key actors]

In this background, the PPP was mobilized from Yokohama to Busan, yet the local context in Busan did not allow the system to be applied to the Suyeong Information Complex project adequately. In particular, financial challenges caused by the withdrawal of the SK group contributed to making the city government much more focused on the economic perspective. Following such circumstances, the local government could not afford to concentrate on a new management approach, the PPP system, for the implementation of the large-scale urban regeneration. Contrary to the initial expectation, the new governance system was viewed as an impractical approach for the local policy actors (that led the mobilisation of PPP from Minato Mirai 21 such as civil servants,

politicians, and urban planners of Busan Metropolitan City) in the circumstance of South Korean urban planning.

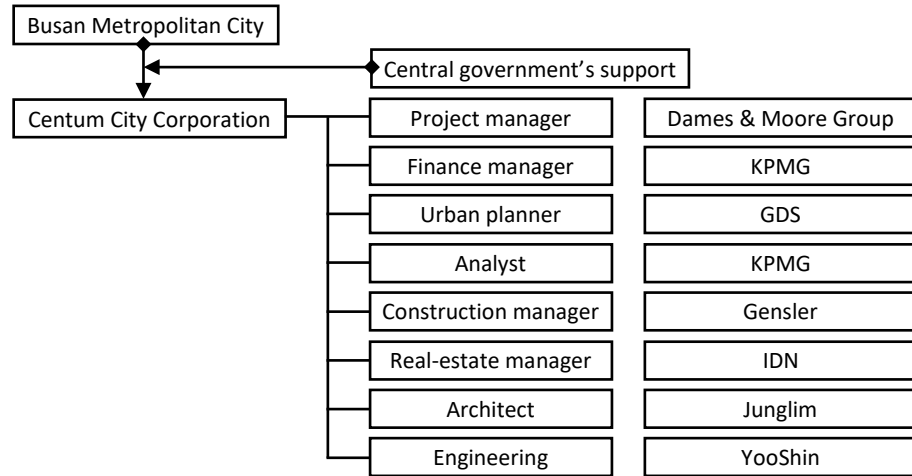


Figure 5-5 The project management framework of Suyeong Information Complex Corporation (Source: Choi, 2006)

After the withdrawal of the largest investor, the PPP system of the Suyeong Information Complex mutated to the traditional Korean bureaucratic governance system. When Sang-young Ahn, the second mayor of Busan, was elected by popular vote in 1998, he announced that the city government would resume and complete the Suyeong Information Complex project. He replaced the deputy mayor of Busan as the Chief Executive Officer of the PPP (Suyeong Information Complex Corporation). Then, the Suyeong Information Complex Corporation adopted the project management framework for the first time in South Korea and began to use it to deliver the urban regeneration project (Figure 5-5). The corporation hired an American engineering consulting group, Dames & Moore Group (DMG) as a project manager. Seven companies including DMG formed a consortium to increase the performances and the efficiency of the redevelopment project. As an urban designer and planner, Sega GameWorks and GDS published the outcomes of Suyeong Information Complex planning with an in-depth financial analysis by KPMG and market analysis by ECS. GDS and Gensler worked as a

construction manager whilst IDN played the role of real estate manager. In addition to seven global firms, Korean architect group JungLim and YooShin were responsible for the details of the architectural design, management, engineering and urban design.

The role of the Suyeong Information Complex Corporation also shrank after the withdrawal of the SK Group (Table 5-2). Since it was operated by Busan Metropolitan City government instead of the SK group, it played a role as a public enterprise with no administrative authorisation. So, it worked as one of the departments within the city government. Based on the contract with the Busan Metropolitan City government in 2001, the corporation took responsibility for land development and sales, property management and supervising the development project. However, their roles basically depended on the municipal government's policies. The number of employees constantly decreased after 2001 because the project would be unlikely to be completed (Table 5-3).

Suyeong Information Complex Corporation could not make decisions regarding the implementation of Suyeong Information Complex independently since it was economically fully supported by the local government. Due to the withdrawal of the SK Group, the organisation's status became worse (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: local context – political and economic issue]

	Before the withdrawal of SK group	After the withdrawal of SK group
Rate of share	24.9%	49%
Business type	Limited Corporation	Public enterprise
Financing	SK group	Busan Metropolitan City government
Role	On behalf of the local government	Documentation work

Table 5-2 Change of Suyeong Information Complex Corporation (Source: Busan Metropolitan City)

Year	1999	2000	2001	2002	2003	2004
Employees	14	21	29	21	14	13

Table 5-3 The number of employees of Suyeong Information Complex (Source: Busan Metropolitan City)

In summary, due to the supervision of the IMF and the withdrawal of the SK group, both the delivery of Suyeong Information Complex and mobilisation process were interrupted. As the unexpected but strong 'coercion' by IMF forced the South Korean government to make tight fiscal policies, knowledge and policy circulation on the opposite side (regarding urban regeneration) was paused. Also, the change of local policy actor who 'searches global best practices to embrace, cutting-edge city models to emulate, and hot experts from whom to learn' (McCann, 2011) also impacted on the circuits of PPP model and knowledge and policy (the urban regeneration idea collected in the period of strategic planning).

Contextually modified planning: modified and contracted policy mobility (2001-2006)

After this challenging period, the Busan Metropolitan City government changed the name of the project from the Suyeong Information Complex project to Centum City project. This decision was made based on the cancellation of the original aim to create a 'teleport' city, and to encourage the citizens of Busan to have increased self-esteem³⁶ for the successful delivery of the new urban regeneration project (Lee, 2000).

Changing the name of a project is a big deal in Korean culture. It encouraged developers to be re-motivated and to focus on what they had to do. It was particularly meaningful because the name was determined by public contest. It showed that the project was re-starting with participation of local

³⁶ Busan citizens have a strong identity as a member of the city of Busan: as the first harbour city, the only city surviving from the Korean War, and the shrine of the movement for democratisation between the 1970s and the 1980s.

*citizens (Choi, 2006). [code: local context – political
and community issue]*

The Centum City project was resumed by the proactive developer as well as the landowner, Busan Metropolitan City government, on behalf of the Centum City Corporation (previously, Suyeong Information Complex Corporation). The corporation took responsibility for the delivery of the project, but it did not play such a role anymore because it was operated by the municipal budget. To overcome such threats and challenges and to maintain the economic sustainability of the Centum City project, various themes of contextually modified planning were conducted: changing the original strategic planning with deregulation; selling the ownership of the land in the development area with diverse attractive marketing strategies; creating media and film industrial cluster; and suggesting environmentally sustainable approaches in the built environment. The contextually modified planning meant that the knowledge and policy circulation process which had previously begun, for instance, the PPP from Minato Mirai 21, was modified, shrunk, and no longer continued, or a new knowledge and policy circulation process would be newly begun, or the Busan Metropolitan City government would implement some programmes that were developed autonomously.

Foremost, through the change of the original strategic planning with deregulation, the city government endeavoured to overcome the financial weakness of Centum City. Due to some challenges stated above, the Busan Metropolitan City government had to manage the entire delivery of the urban regeneration project by itself. Of all challenges, securing a huge amount of funding, particularly concerning the land sale, was the biggest issue. When Busan Metropolitan City decided to buy an abandoned brownfield from the Ministry of National Defense, the area was not in use. Technically under the law, if the national property is not in use, it should be managed by the Ministry of Economy and Finance. However, if Busan Metropolitan City government purchased the property from the

Ministry of Economy and Finance, the local government should pass greater administrative hurdles and needed to spend a greater amount of money compared to buying the property from the Ministry of National Defence. At that time, although the Ministry of National Defence did not use the abandoned space, the Ministry was still responsible for the land by arguing its ownership. The Busan Metropolitan City government took advantage of this situation. The city government suggested to the Ministry of National Defence to exchange the land with the city's empty space and to pay the remainders by using the municipal budget.

The corporation did not have enough funds for the development. Busan Metropolitan City government covered the funds by using the municipal budget (transferring the general account to the special account) and bank loan. The city government mortgaged the lands purchased from the Ministry of National Defence to get a high street bank loan. This approach resolved such financial challenges temporarily. In the long term, through the changes of strategic planning, the local government planned to repay the general account (transferring the special account to the general account) and loans by selling the land ownership to private firms (Interview with former officer of Urban Development Bureau of Busan Metropolitan City, 2017). [code: local context – economic issue]

This was quite a complicated situation because the city of Busan did not have enough funds for the regeneration project from the initial stage of the project. Since the city government already made a contract with the Ministry of National Defence, a huge amount of funding for the land sale needed to be paid over three years. Furthermore, there was a type of penalty: if the city government did not begin the construction of the infrastructure, the local government

had to return a specific amount of funds to the central government. Thus, the city government had to transfer the general account to the special account to secure enough funds from the municipal budget. Then, the budget, which was the expenditure for buying land from the Ministry of National Defence, should be reimbursed when the local government made profits particularly through the land sale during the delivery of the urban regeneration project.

Regardless of the Busan Metropolitan City government's effort, an instalment of a contract for the land sale between the Busan Metropolitan City government and the Ministry of National Defence was too much. Without any support (for instance, investment from private firms), the city government could not handle the project and had the risk of going bankrupt. Private businesses, however, thought regulations in the regeneration project were too strict to make profits. Thus, to resolve the financial issue, the local government decided to ease such regulations and changed the land and building use from industrial use to residential and commercial use. Going through nine stages of change of the original strategic planning, focusing on expanding deregulation, the local government aimed to allow residential and commercial development. By changing block size (Table 5-4), more developers, focusing on residential development, were able to attempt to join the Centum City project. As the local government allowed a diverse scope of industries within the project, many types of firms were also able to move into Centum City. The more private firms were created, the more commercial space was automatically developed. As a result, the city government succeeded in attracting private investors and creating the next generation industrial cluster.

Ultimately Centum City was able to be established because BEXCO (Busan Exhibition & Convention Centre) played an essential role as the centre of Centum City. Its central role remained consistent throughout nine changes of the original strategic

planning. In particular, by hosting global events such as APEC (Asia Pacific Economic Cooperation) and the 2002 World Cup qualifying draw, it proved its commercial value. This motivated investors to join the Centum City project (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: local context – economic issue]

1998 / 1 st Change	2000	2002	2005 / 9 th change
Main issues	Main issues	Main issues	Main issues
<ul style="list-style-type: none"> - Change of block size within the development project - Securing land for industrial usage (Information telecommunication industry) 	<ul style="list-style-type: none"> - Change of block size within the development project - Rearrangement of industrial zone near subway station - Creating green space through theme park and waterfront part 	<ul style="list-style-type: none"> - Broaden the scope of industry into advanced digital media industry - Change of block size within the development project, particularly in residential zone 	<ul style="list-style-type: none"> - Add an educational and knowledge industry in addition to advanced digital media industry - Dismiss suggestions for creating waste disposal site

Table 5-4 Changes of strategic planning (Source: Busan Metropolitan City; revised by author)

Secondly, as the landowner and developer of the urban regeneration project, Busan Metropolitan City government attempted to sell the ownership of the land to private developers to secure sufficient funds. In particular, since there were no private developers to invest their funds for the abandoned area, the local government had to sell the land to private housing developers who were very interested in creating a high-quality housing district in the geographically urban centre. This circumstance allowed the city government to change land use planning of specific districts within the regeneration project from industrial distribution facility use to residential and commercial facility use.

Based on the changed law, diverse strategies for land sales were conducted by Busan Metropolitan City government. Busan Metropolitan City government guaranteed that if the land buyer (developers) were to sell the land after three years, it

would buy back with a five per cent interest on top of the original price for land sale. This was the very first public policy in South Korea implemented to encourage developers to buy land within Centum City (Interview with former officer of Film & Cultural Industry Policy Bureau of Busan Metropolitan City, 2014). [code: local context – economic issue]

The new programme, which guarantees the profitability and refundability of investment on the Centum City project for sure, contributed to motivating the prospective developers to invest in the regeneration project, and to secure liquid capital associated with the low interest rate. Due to the introduction of this new programme, we estimated that land (including real estates) sales will increase from 25% to 35% by the end of this year (with the reduction of council taxes for industrial-use land including registration fee, acquisition tax and property tax) (Kim, 2001; cited in Choi, 2006). [code: circulation of idea – institution and policy / local context – economic issue]

In addition to profit guaranteed by the land resale programme, Busan Metropolitan City government also introduced an advance payment discount programme³⁷, and a single payment discount programme³⁸, both incentives for land purchasers who were keen to make a contact for sure³⁹ and so on.

³⁷ If a purchaser makes an advance payment, the landowner will discount his/her the land principal or instalment interest.

³⁸ If a purchaser makes a single payment within a specific period, the landowner will provide him/her with an incentive of the payment.

³⁹ If there is a land with no competitors and no expectation for sale, the landowner would relax the only prospective purchaser's financial burden.

Due to the confidential agreement between Busan Metropolitan City government and private firms, we cannot provide you with precise information for now. However, I am definitely sure that such programmes offered us an alternative way to resolve the economic crisis by securing enough funds for the investment on the Centum City project. In particular, I believe they were really meaningful initiatives for implementing the regeneration project successfully because there have previously been no programmes ever that guaranteed investors' profits in South Korea (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: local context – economic issue]

These schemes specifically supported the development of a large-scale area in the Centum City project and such diverse schemes applied on almost two thirds of the total area of Centum City (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: local context – economic issue]

The third contextually modified planning was the foundation of Centum Venture Town through the establishment of a media, game and film industry cluster. Busan Metropolitan City government endeavoured to find the best solution which could redeem local industries with the local economy and improve the city image. The city government recognised that the successful growth of Busan International Film Festival (BIFF, Table 5-5) strongly instils an image of 'film city, Busan' in people. This encouraged politicians and civil servants in Busan Metropolitan City to nominate strategically both the visual and tourism industries as the next generation of industries. For

instance, Busan Metropolitan City government designated the Centum City area as the Special Tourist Zone to gain incentives, such as financial and legal support (deregulation), from the national government. In particular, the local government tried to create a visual industry cluster in Centum City and to maintain the industrial district under the support of the national government. This was a good opportunity for the local government to support the creation of the media and film industry in Busan.

Busan has been recognised as a productive city through the success of the BIFF and the development of the visual industry cluster. Moreover, as the BIFF has had repeated exposure in global media, Busan has been brought upfront as a new Asian film city. The BIFF has become an acknowledged film festival recognized by authoritative organisations and magazines globally. It was accredited as being a grade 'A' standard film festival – one of 11 film festivals in the world – by the Fédération Internationale des Associations de Producteurs de Films (Shin et al., 2011). [local context – political issue / circulation of idea – programmes and mega-event]

The national government simultaneously established a plan to support the local industry. Central government designated Centum City as a cultural industry promotion district in 2008 based on a framework, seeking 'the promotion of cultural industries'. The designation of the cultural industry promotion district was one of three policies set to encourage the formation of a service industry-led cluster by the Ministry of Culture, Sports and Tourism in the local area. These policies aimed to decentralise and revitalise the local economy and gave some incentives, such as several levy

exemptions and privileges to the organisations within the designated area (Byun et al., 2011).

	Films (Countries)	Accredited Guests	Attendance	Budget (Pound)
1st (1996)	169 (31)	224	184,071	1.27M
2nd (1997)	163 (33)	450	170,206	1.41M
3rd (1998)	211 (41)	659	192,547	1.44M
4th (1999)	207 (53)	835	180,914	1.53M
5th (2000)	207 (55)	3,017	181,708	1.56M
6th (2001)	201 (60)	3,761	143,000	1.70M
7th (2002)	226 (57)	4,387	167,349	1.87M
8th (2003)	243 (61)	4,387	165,103	2.13M
9th (2004)	262 (63)	5,638	166,164	2.28M
10th (2005)	307 (73)	6,088	192,970	3.14M
11th (2006)	245 (63)	8,321	162,835	4.27M

Table 5-5 The growth of BIFF between 1996 ~ 2006 (Source: BIFF)

Furthermore, the central government decided to relocate three primary public institutions in the field of the film and media industry, the Korean Film Council⁴⁰, the Korea Media Rating Board⁴¹ and the Game Rating and Administration Committee⁴², from Seoul to Busan. The movement of such essential institutions on the ground of the film and media industry had a significant meaning. Firstly, Centum City was expected to become a centre of the film industry. The South Korean government tried to divide the film industry into two cities. Under the public realm, the central government promoted the city of Busan to invest the whole film industry to achieve a proper level of global competitiveness within the film industry by: creating an international network; exchanging technologies regarding the film industry and educating the labour forces engaged in the film industry. On the other hand, the city of Seoul only focused on the commercial film industry which was analogous to Los Angeles.

⁴⁰ The KFC is responsible for the overall film industry in South Korea and aims to improve the film quality and the vitalisation of the Korean movie and film industry.

⁴¹ The Korea Media Rating Board makes decisions on the rating of movies, visual arts and advertisements and whether they are suitable for release or not.

⁴² The committee tries to create a wholesome environment for both producers and consumers by rating products and cracking down on the black market.

The New York Film Festival was a benchmark for the BIFF organizing committee. When the committee initially hosted BIFF, they expected Busan to become the centre of the film industry in South Korea. They believed that this would result in the improvement of the local economy. However, it did not happen. Since the film market was still in Seoul, a number of private firms, directors, producers, technicians and even actors did not want to move into the local area. Thus, the BIFF organizing committee granted a new role to BIFF analogous to the New York Film Festival which focused on experimental cinema and retrospectives rather than popular movies. The committee intended to make the city of Busan an incubator for indie moviemakers by providing them with comfortable and convenient film making space, sufficient accommodation for staff and actors, and financial schemes. The BIFF committee assumed that the virtual cycle of such a plan would contribute to improving the local industry and the local economy under the concept of urban sustainability. However, it was not successful (Kim, 2014, Oh, 2014). [code: circulation of idea – programmes and mega-event]

The national government expected the synergy effect between those institutions and local private firms based on geographical proximity. The South Korean government imagined that the increase of social interaction between the public institutions and private firms would lead more companies to move into Centum City. The government planned to create a new Asian film market based on the agglomeration of private firms (Oh, 2014).

Furthermore, going beyond private clusters, public offices and educational facilities in the visual industry also moved into Centum City by using both the central and local governments' promotions (Oh, 2014). In detail, the Busan Cinema Centre was built in 2011 to provide a qualified venue for the BIFF. The building, which was designed by global architecture company, Coop Himmelblau, has become very famous for its special design – the longest roof in the world. During the film festival period, it was used as the venue for the opening ceremony, closing ceremony, other screenings and as a control tower. The centre is usually used as a multipurpose exhibition hall, independent film theatre, film archive, and office space outside of the festival season (Kim, 2007). Kang, the former managing director of BIFF, asserted that

The Busan Cinema Centre symbolises not only 'dynamic film city, Busan' but also the willingness and consideration of the Busan Metropolitan City government toward the prosperity of the Busan film industry. As the goal of BIFF is to have industrial capacity beyond the festival, the architecture could create a synergy effect through interchange of vigorous information and materials with various surrounding institutions (Kang, 2014). [code: local context – political and community issue]

Various kinds of visual industry infrastructures such as Cinema Tech Busan, Busan Game Academy (institution for education, seminar and archive), Busan Film Studio (film making), Busan Cultural Industry Research Centre (supporting research and development projects related to cultural technology), Busan 3D Production Centre, AZ Works (post production facility related to work such as computer graphics and digital material), and Busan Cultural Contents Complex (promoting visual firms) were also established in Centum City (Song, 2014). It is arguable that the film and visual industry and its cluster were created under the contextually modified planning. However, it is

certain that both the central and local governments endeavoured to redeem the strategic planning which failed at the initial stage through contextually modified planning.

The last outstanding example of contextually modified planning is a group of environmentally sustainable approaches in the built environment conducted by the Busan Metropolitan City government. Environmentally sustainable ideas were not applied in practice at the initial stage of the Centum City project. However, the idea could be found in the concept of the Centum City project, which was resumed in 2001. Sang-yeong Ahn, the second mayor of Busan to be elected by popular vote, instructed a Japanese research institution to investigate and to report a project feasibility analysis. After the research, relevant civil servants and politicians visited Minato Mirai 21, a typical example of a sustainable regeneration project in Yokohama, Japan to learn from their experiences regarding environmental sustainability such as the practical application of using low carbon sources and methods for reducing demands. Itaru (2017) added that

Civil servants as well as politicians were curious about our ‘urban development embracing water and greenery’. Since the environmental circumstance of Busan is quite similar to that of Yokohama, they expressed a strong interest in the special features of Minato Mirai 21’s waterside environment with numerous green spaces linked by promenades. For example, they were fascinated by Takashima-Chuo park (multi-functioning space for community event and playground facilities) and Rinko Park (the largest green space with a fine view of the port) (Itaru, 2017). [code: circulation of idea – institution, key actors and programmes / local context – environmental issue]

Kishida and Blakeney (2017), the former managers of the area management team in Minato Mirai 21 Corporation, commented about a field trip by groups of civil servants from South Korea.

A number of South Korean civil servants and politicians came to Yokohama and asked about the planning process of Minato Mirai 21. Especially, they concentrated on urban design guidelines, the creation of green space for tourism, and green architecture. Since we were very proud of green buildings accredited by CASBEE, approximately 80% of CASBEE accredited buildings are located in Minato Mirai 21, we were keen to show them how the building systems work. For instance, we introduced to them the ‘Recycling rain and wastewater’ management system: how rainwater falling on the roof is collected, stored in tanks, and reused for garden sprinklers, toilet cisterns, and so on. Furthermore, we also explained to them about green rooftops, walls and public spaces, which reduce the burden on the building’s air-conditioning and the amount of heat stored by the building framework (Kishida and Blakeney, 2017). [code: circulation of idea – institution, key actors and programmes / local context – environmental issue]

Based on such experience, in 2005, William Bliley, the project manager and the vice president of Dames & Moore Group, conceptualised Centum City as an ecological buffer zone to minimize the impacts of urban pollution which included: river walk, connecting convention facilities and Suyeong river; community port, a circular structure filled with film and media firms and relevant institutions; and central park, a circular park surrounded by commercial facilities and accommodations (Choi, 2006). As a result, APEC Naru park, the only green space (9.9 ha) within the Centum City project, was finally

created by the Busan Metropolitan City government. It included multiple elements which could be seen in Minato Mira 21 such as a public space for events and beautiful scenery, with superb night-time views for iconic buildings. To satisfy the citizens of Busan, the first waterfront park in the urban centre was strategically planned through several public consultations. Through the consultations, the city government tried to listen to both citizens' and externally validated experts' voices. Meanwhile, regardless of allowing community participation throughout the planning process of the APEC Naru park, which was regarded as the very beginning of a democratic approach particularly in urban policy making process by the Busan Metropolitan City government, the outcomes of the APEC Naru park were actually criticised by press. As a consultant from the academic field, Oh (2017) from the department of hotel and tourism management at Kyung Sung University commented,

After the stabilisation of the Centum City development project, civil servants who suffered risky situations tended to avoid new investments on the project. I recommended a global trend: creating a venue as a resort city which includes functions of convention and exhibition. Since there are hotels, meeting facilities, good climate conditions with beautiful scenery, and recreational facilities in Centum City, Naru park could be considered to have optimal conditions as a resort city. Of course, such plans should require further investment. It was advertised that the APEC Naru park was created through community participation, but I was wondering if the public's opinions were practically adapted on the project. At least, the result of the park was totally different from my opinion (Oh, 2017). [code: circulation of idea – legacy from the past and best example (mode)] / local context – environmental issue]

After much meandering, the project was finalised in 2007 with a series of contextually modified planning practices. The Centum City project was summarised as a mixed-use development surrounded by housing, retail and amenity facilities. This made the area a more vibrant and desirable liveable place and the project became one of the iconic development projects in South Korea as well as in Busan. In the series of contextually modified planning, knowledge and policy circulation process was proceeded after modification, shrinkage, or a new beginning. In detail, Busan Metropolitan City government developed its independent policies/programmes regarding selling the ownership of the land with diverse marketing strategies. In terms of deregulation, the city government maintained the strategic land-use planning of Minato Mirai 21 but slightly modified it based on the local context, particularly the business economy, of Busan. Regarding creating media and film industries, the local government attempted to begin a new type of knowledge and policy circulation by following the film industry model of New York. In terms of suggesting environmentally sustainable approaches in the built environment, Busan Metropolitan City government endeavoured to learn and adapt the Minato Mirai 21 model on the local context through a field trip. However, the actual outcomes created by the city government were strongly impacted by the financial status and civil servants' willingness. In summary, the Centum City project was completed by an 'incomplete transfer' (Stein et al., 2017) which consisted of several pieces of circulation processes in various parts. Interestingly, as some of the mobility literature contends that everywhere is a product of elsewhere, Centum City (as a legacy or the best practice model) has also been disseminated to other cities not only in South Korea (Seoul, Daejeon, and Daegu) but also East Asian countries (Dalian and Shandong in China).

Discussion & Conclusion

By unpacking how the first urban regeneration project in Busan was implemented through the lens of a policy mobility framework, this chapter highlights how particular ideas, policies and practices surrounding a large-scale urban regeneration (property-led development) become naturalised and mobilised in local areas. This chapter categorises the implementation process of Centum City as three phases: Strategic planning: the beginning of knowledge and policy circulation (1994-1999); Threats & Challenges: the interruption of local context against policy mobility process (1997-2000); and Contextually modified planning: modified and shrunk policy mobility (2001-2006).

Busan Metropolitan City endeavoured to revitalise derelict urban space and local economic recession mainly caused by the industrial restructuring. In particular, Busan Metropolitan City government and the South Korean government attempted to develop an empty urban centre, previously used as a military airport and container yard, into an information and technology industrial complex named Suyeong Information Complex. Through the knowledge and policy circulation process, the local government sought to follow the international idea from the case study of New York in the United States and Moscow in Russia (teleport city), and of Yokohama, Japan (Minato Mirai 21).

However, due to the development of telecommunication technology and unexpected financial issues, the Suyeong Information Complex project was not implemented as well as was originally planned. Since the development of telecommunications enabled the public to use the Internet without any public facilities, the idea of a 'teleport' was vanished. This was the very same situation that other countries such as the USA and Russia also faced. Regarding the currency crisis in South Korea and the withdrawal of the largest investor (which was also the main developer) in 1997, Busan Metropolitan City government had to focus on securing enough funds by itself for the project. Since the contract for buying the empty land from the

Ministry of National Defence was already made, the city government had to make a payment within the contract period. In the city government's perspective, the urban regeneration project should not be stopped so the local government changed and modified the original strategic plan, partly learned from Minato Mirai 21.

When the economic challenges and threats were successfully resolved, a series of contextually modified planning was implemented: changing the original strategic planning with deregulation; selling the ownership of the land with diverse attractive marketing strategies; creating a media and film industrial cluster; and suggesting environmentally sustainable approaches in the built environment. The ultimate goal of Centum City was to revitalise the derelict urban areas and the local economy. By deregulating strategic planning regarding land use, the Busan Metropolitan City government attracted private firms to move into the Centum City by creating a high-tech media and film industrial cluster which was considered to be the next emerging generation of industries. Furthermore, the city government tried to adapt the concept of environmental sustainability within the project. Some built environment resources learned from Minato Mirai 21 were applied to the establishment of APEC Naru park. In particular, through community engagement consultation (public hearing, consultations among civil servants, academia, members of a city council), the local government tried to listen to the citizens' voice during the policy making process regarding the APEC Naru park.

Consequently, Centum City has become one of the most famous attractions in Busan. Moreover, the area is surrounded by high-end residential buildings and a small portion which consists of an industrial complex. The property value of the Centum City area has increased extremely currently compared to the past. Furthermore, Centum City has become famous as one of the most successful regeneration projects and as an iconic space in South Korea as well as in Busan. As of now, the Centum City model has been exported

with its unique characteristics to other cities, countries and non-profit organizations by the municipality.

Within the long account of Centum City as explained above, there were several attempts of knowledge and policy circulation even though the circulation process was not completely implemented due to the local context. However, it is sufficiently meaningful that the knowledge and policy circulation process was found within the delivery of the first large scale urban regeneration project in Busan, South Korea. Four distinctive characteristics can be summarised in such a knowledge and policy circulation process within Centum City.

Foremost, circumstances surrounding the city of Busan produced an atmosphere of knowledge and policy circulation. Globalisation and urban deterioration promoted Busan Metropolitan City to be redeveloped. At that time, the idea of urban regeneration became popular across the world. The world competed internationally to become a charming space with the next generation of industries. To win the competition without risks, many cities tended to 'copy' or 'emulate' the 'best examples' or 'best practices' from other countries such as London Docklands, Baltimore in the U.S. and Yokohama in Japan. The Busan Metropolitan City government was also keen to implement the first large scale urban regeneration project successfully. Furthermore, civil servants in Busan did not have any relevant experience. This background led the city government to pay attention to knowledge and policy circulation.

Secondly, the change of power (and role) of actors within the policy making process led the knowledge and policy circulation. Contrary to the policy mobility framework, which focuses on unclear entities that lead the mobilisation process, there was still an actual actor who was responsible for the knowledge and policy circulation process.

However, the advent of local autonomy changed the role of actors and institutions. Civil servants in Busan Metropolitan City were given the authority (this research interprets the authority as a type of power) for urban policy making. Their independence and flexibility,

compared to the traditional rigid central government-led top-down governance system, promoted local civil servants to follow knowledge and policy from other contexts, taking on the role of 'incoming policy consultant'. For instance, there was 'interpersonal interaction' between Minato Mirai 21 Corporation and civil servants in Busan Metropolitan City as types of field trips and business meetings. Through such interactions, the local civil servants adapted the PPP system to Centum City.

Thirdly, 'global imaginaries' and 'lessons' were mobilised whilst a complete form of policies and programmes was not. Circulated knowledge and policy within Centum City investigated by this research was, for instance, an environmentally sustainable approach. This is not a clear form of policy or practice. Civil servants learnt from the case studies and adapted some technologies, ideas and images to the local context. However, regarding the PPP system, it worked in a completely different way and was a nominal policy in Busan's context. This means that the local context in Busan significantly interrupted the circulation of (a clear form of) policy or system. A clear form of policy and programme is not flexible to change and this tendency brings about conflict between local context and global programmes. On the contrary, ideas, technology and images were circulated after the modification and localisation process with adaptation to the local context. Such localisation tended to reduce the sense of difference.

Lastly, the knowledge and policy circulation process in Centum City was at a very beginning level. Since it was a quite simple process, the project could be interpreted by traditional frameworks of circuits of knowledge and policy (lesson-drawing, policy diffusion, and policy transfer) in addition to the policy mobility framework. Furthermore, the knowledge and policy circulation process was paused, modified, contracted and even cancelled from the strategic planning to contextually-dependent planning. This could be interpreted as 'incomplete transfer' by the policy mobility framework. However, as

knowledge and policy circulation in Centum City was rudimentary and interrupted significantly by external circumstances (such as the economic crisis) from the very start of planning, it would not be proper to appreciate it as an incomplete transfer. Instead, this chapter assumes that such elementary knowledge and policy circulation experience will be a good legacy, as an exemplar for the following urban regeneration projects.

The following chapter will discuss the second empirical case study, the North Port project. It aims to answer the questions of 'how the North Port regeneration project has been implemented', 'to what extent the circuit of knowledge and policy particularly concerning international points have impacted the project' and 'to what extent such knowledge and policy circulation process had been developed compared to that of Centum City'. This will be analysed by detailing the local governance system, the relationship among international investors, international developer, and local communities, engaged in the North Port regeneration project.

Chapter 6 Empirical Chapter 2: North Port

Introduction

The previous chapter, as the first empirical chapter focusing on Centum City, explored the way in which a large-scale urban regeneration project has been delivered over time through the theoretical framework of policy mobility. It concluded that policy mobility was introduced into the delivery of the urban regeneration project. However, strategic planning did not work well, and it was changed in a series of contextually modified projects due to external circumstances. In this background, policy mobility partly occurred and there was only a limited application of policy mobility on the delivery of the project.

As the second part of the empirical analysis, this chapter aims to investigate another large-scale urban regeneration project in Busan, the so-called North Port redevelopment, through the theoretical framework of policy mobility. It will address the way in which the North Port project has been implemented and particularly explore the account of international threads surrounding the North Port redevelopment.

Historically, Busan port⁴³ area was a symbol of Busan Metropolitan City which is a coastal city. Due to the geographical location of being the closest city from Japan, Busan port was built by the Japanese Government-General of Korea in the era of Japanese colonization. In those times, it worked as an important hub for trade with Japan and became the first international port in South Korea. Between the 1960s and 1980s, the Port of Busan expanded significantly through the proliferation of the port industry. However, from the 2000s, Busan port experienced several problems. The port facilities were too small and derelict to cover an increasingly large amount of cargos. To

⁴³ In the current era, Port of Busan consists of six ports – North Port, South Port, Gamcheon Port, Dadaepo Port, Yongho Port, and Busan New Port. In this chapter, however, Busan port (Port of Busan) means North Port because the other ports, except Busan New Port, are quite small and the roles of ports are relevantly marginal compared to those of North Port and Busan New Port.

resolve this, the South Korean government and Busan Metropolitan City built a new port (Busan New Port) and this resulted in the shrinkage of the old port's function. Many jobs related to the old port were lost and there was a decrease in the local population. This led to the decline of the local economy.

Moo-hyun Roh, the former President of South Korea, was keen to resolve this issue through a large-scale urban regeneration project. He commented that 'it is time to have a spacious waterfront area for citizens in the first coastal city of South Korea'. He encouraged the central government (the Ministry of Oceans and Fisheries) to begin the project during his incumbency. Based on the arbiter's enthusiasm, Busan Port Authority on behalf of the Ministry of Oceans and Fisheries⁴⁴ kicked off the establishment of strategic planning for Busan port redevelopment, North Port Redevelopment Project. Through the North Port Redevelopment Project, both Busan Port Authority and Busan Metropolitan City government⁴⁵ endeavoured to achieve four main aims for the future of Busan: to create an international maritime tourism industry hub; to develop the North Port as the gate of the Eurasia continent; to create a waterfront area for Busan citizens and to establish a model of Korean-style port redevelopment.

The North Port Redevelopment Project is a large-scale urban regeneration project similar to the Centum City project. However, from the very start of the project, Busan Port Authority referred to global case studies (e.g. Sydney, Australia and Dubai, United Arab Emirates) regarding port and waterfront regeneration. Furthermore, through the experience of the previous regeneration by the city government of Busan (Centum City), the port authority realised that

⁴⁴ Port redevelopment is a complicated issue in South Korea. As the port is the national government's property, the Ministry of Oceans and Fisheries is responsible for the redevelopment project. So, the ministry gives the authority for the redevelopment to Busan Port Authority, the local government agency which engages in the ministry. Yet, since Busan port is located in Busan, Busan Metropolitan City government has to approve the redevelopment plan, particularly regarding land and buildings, suggested by Busan Port Authority.

⁴⁵ The city government has a responsibility to approve construction projects which occur within the boundary of Busan.

such a large-scale urban regeneration project cannot be implemented by domestic investment including both national and local government supports. Thus, Busan Port Authority actively employed international resources throughout the North Port regeneration. In detail, the process mainly focuses on the question of how the international dimensions have influenced the local context by investigating three main issues: the implications of international best examples at the initial stage of the planning process; the role of international investors on the project and the impacts of a round table based on field trips across the world.

By focusing on international dimensions, the North Port project will be explored and investigated in detail – how the project has been impacted by international dimensions and to what extent the policy mobility impacted the delivery of the project – with comparison to the Centum City project. The analysis will bring out the characteristics of international threads of policy mobility through the implementation of North Port redevelopment. This chapter assumes that there was active and outstanding policy mobility within the project compared to Centum City. Furthermore, international dimensions influenced the delivery of North Port redevelopment heavily. The following section will describe the context and general information regarding the North Port in Busan. Then, three international threads within the policy mobility will be discussed critically: (1) Dubai & Sydney case: Between global imaginaries and best practice; (2) The international investors: actors as outgoing policy consultants; (3) Roundtable: the effectiveness of micro space for policy mobility.

Background

The context of Busan port (previously spelt Pusan port⁴⁶) is a bit different from that of Centum City. The Busan port area has been a symbol of Busan whilst the Centum City area was an abandoned

⁴⁶ In 2000, South Korea officially changed from the McCune–Reischauer romanization system (Pusan) to the Revised Romanization of the Korean system (Busan).

brownfield. The Centum City project focused on revitalising a brownfield, which was used as a container yard and a military airport, in an urban centre. On the other hand, the North Port redevelopment project concentrated on fundamental industrial restructuring regarding shipment and logistics: the redevelopment of old port facilities, the improvement of the image of the city as a port city, and the creation of a waterfront area for citizens.

As Korea's main sea gateway, Busan is the closest city from Japan as it is located on the southeast coast. Due to the geographical characteristic, the Port of Busan was historically a trading port with ties to Japan. In the early 17th century, diplomatic relations were formed between the Joseon Dynasty (Korea) and Tokugawa Shogunate (Japan). Through the relationship, the international trade between two countries was started and the Port of Busan became Korea's first international port in 1876. Under the Japanese colonization which started in 1910, the Port of Busan was developed, and Japanese citizens were allowed to settle in Busan by the Japanese Government-General of Korea. The old Japanese settlement near the Port of Busan continued to thrive and the Port of Busan became an important hub for trade with Japan. From this time period, the Port of Busan modernized quickly. It was developed from 1912 by constructing the five harbours with eight additional wharves (Yoon, 2012; cited in Busan Metropolitan City, 2019). The urban area surrounding the port was also developed from 1898. Before 1898, the area was a small village surrounded by the ocean and mountains, through a land reclamation project for the extension of Busan Main Customs⁴⁷. In addition to the Busan Main Customs, Busan Central Post Office and Busan Train Station were established on the reclamation site in 1908. The Japanese government laid railroad tracks across the city of Busan by linking the sea to trucking and rail operations on land. Busan was the second South Korean city to adopt steam tramways before electricity was put to common use in

⁴⁷ At that time, Customs is the largest part within port facilities in South Korea.

1915 (The Academy of Korean Studies, 2014). Since the 1930s, Busan became one of the developed and largest cities in Korea. During the Korean War, Busan was one of two cities in South Korea which escaped the invasion by North Korea. For a time, Busan was the provisional capital of the new Republic of Korea and the site near the Port of Busan became a major refugee space. Since the end of the Korean War, the city of Busan became a self-governing city with a strong urban identity as a harbour city, in particular, and as an urban centre of the second largest city in South Korea.

Since the 1990s, the amount of container throughput dramatically increased (Table 6-1). During this era, the increase of both the scale and the swiftness of the vessel led harbour loading and unloading equipment to become larger and modernised. Between 1990 and 1995, the amount of cargo throughput grew by approximately 14%. The actual port capacity was 4.5 million Twenty-foot-Equivalent Units (TEUs) whilst the estimated port capacity was 2.2 million TEUs. This brought about a chronic delay in the working process and lack of container yard space. The small scale of the container yard could not provide a liner shipping company with a long enough period for keeping their cargoes. To prevent losing customers, the Busan port needed to meet customers' needs by handling cargoes on time (Busan Port Authority, 2017a). To do so, the port had to pay a huge amount of operation costs constantly. Furthermore, other ports in East Asia such as Shanghai, China and the Republic of Singapore attempted to enlarge their physical and functional capacities. Thus, the Korean government was concerned about the decrease of competitiveness of the container port in Busan and decided to build a new container port, which was equipped with a distribution centre, on the west side of the old port area (Figure 6-1). The construction of the new port began in 1997 with an investment of £7.16 billion pounds and has been partly completed since 2006. The new port has been termed officially as the Busan New Port whereas the name of the old port changed to the North Port due to its geographical location in Busan.

	Total (thousand TEUs)	Container Terminals (thousand TEUs)	
		Busan New Port	North Port
1996	4,760	-	4,760
1999	6,439	-	6,439
2002	9,452	-	9,452
2004	11,492	-	11,492
2006	12,048	238	11,810
2008	12,452	1,579	10,818
2010	14,193	5,485	8,708
2012	17,046	9,443	7,603
2013	17,686	10,963	6,723
2014	18,683	11,966	6,717
2015	19,469	12,878	6,591
2016	19,456	12,861	6,595
2017	20,493	13,480	7,013

Table 6-1 Changes of Container Throughput over a year (source: Busan Port Authority)

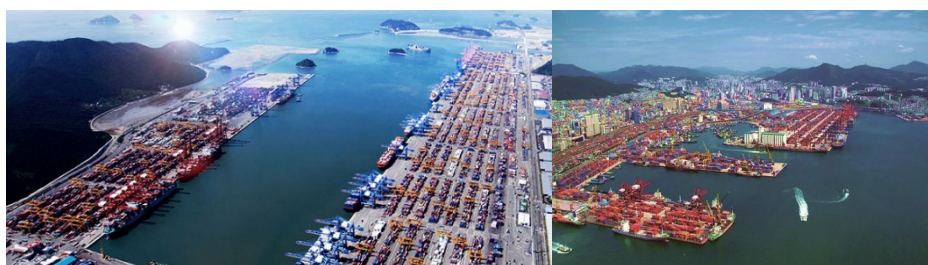


Figure 6-1 North Port (Right) and Busan New Port (Left) (source: Busan Port Authority)

In 2018, the ports in Busan (six ports in total) have become one of the busiest harbours in the world. They have handled around 20.49 million TEUs of container throughput⁴⁸ in 2017, increased by 5.3 % from the previous year, due to the increased transshipment. Lloyd's List ranked the ports of Busan as the sixth busiest port in the world (Figure 6-2)⁴⁹ regarding TEUs of containerized cargoes.

Due to the development of Busan New Port, the role of North Port has changed. Foremost, the number of containers throughout has decreased significantly, because the efficiency and effectiveness of Busan New Port was much higher than that of the North Port (Table 6-1). Moreover, since the North Port was built more than a half-century before, it incurred a great amount of maintenance and operation costs. For instance, the old international passenger

⁴⁸ Trans-shipment throughput refers to the volume of transfer freight that temporarily stays in an intermediate port before being transported to another destination.

⁴⁹ <https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2018>

terminals within the North Port area were refurbished annually. Large-size container ships could not come alongside the berth due to the shallow sea in the North Port. These issues resulted in low productivity of North Port, the first harbour in South Korea, and it was no longer attractive to customers (Table 6-2).

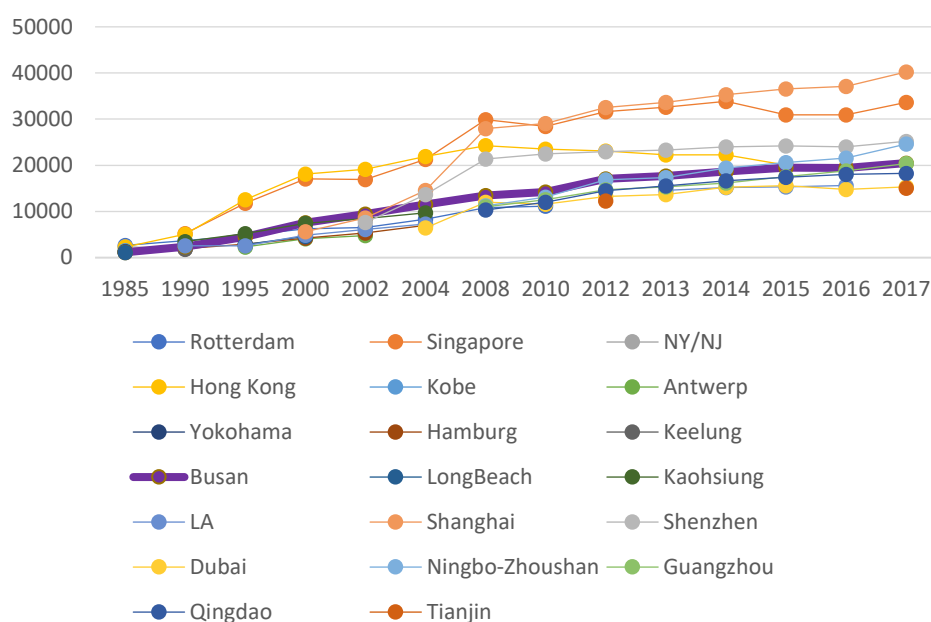


Figure 6-2 Top 10 Busiest container ports in the world (source: Maritime intelligence – Lloyd's List, 2019)

	North Port (Old Port)	Busan New Port
Central Terminal Operators	4	5
Container Terminals	5	5
Passenger Terminals	3	(1 multi-purpose terminal)
TEU Handling Capacity	6.3 million	9.2 million
The number of berths	17	23

Table 6-2 Port Facilities by Function (source: Busan Port Authority)

The South Korean government, however, did not resolve the problems of North Port and this exacerbated the deterioration of the port. The geographical location also impacted on the relation between North Port and Busan New Port since the new port was too close to the old port area (only separated by 25 km). Such issues caused unnecessary competition between North Port and Busan New Port in addition to fierce competition among regional ports in

Northeast Asia whose container throughput accounted for 39 % of the world container throughput in 2013 (Kim, 2015). In this context, global shipping companies continuously requested the decrease of tariff for loading and unloading cargoes. For instance, the Grand Alliance, the leading integrated consortium in container liner shipping, recently requested a 20% reduction of the tariff. The interest of global port communities on environmental issues (in particular, a strict international regulation on the emission of carbon dioxide) encouraged North Port to be changed and developed. Thus, to provide the North Port with a new role distinguished from the Busan New Port and to set up an integrated port management system, the South Korean government planned to implement the North Port Redevelopment Project (Busan Port Authority, 2017a).

The North Port Redevelopment Project was categorised as a mixed-use property-led regeneration focusing on port redevelopment (as a development of brownfields). The North Port was one of the 12 derelict ports in South Korea and the South Korean government has aimed to redevelop it by 2020. Port regeneration is defined as a project for changing derelict or unused port area with its adjacent spaces in a sustainable way (Busan Port Authority, 2017a).

Regarding North Port, the main purpose of port regeneration is to restructure the function of the port facilities based on strategic urban planning and to provide citizens with public space as a historical area after the conservation process.

The North Port Redevelopment Project was launched by the Roh administration⁵⁰ in September of 2004. Due to the significant changes of the function of North Port, a government research service regarding the redevelopment of North Port was conducted in 2004. Then, Moo-hyun Roh, as the President of South Korea at that time, instructed a review of the North Port redevelopment. He suggested that

⁵⁰ Moo-hyun Roh was a South Korean politician who served as President of South Korea (2003–2008).

We should create the North Port as a comfortable waterfront space for citizens and their family to hang around the site with casual clothes (Kim, 2018b). [code: local context – community issue]

Also, Jae-in Moon, the current President of South Korea, has also concentrated on the importance of the North Port Redevelopment Project since 2017 when he was the leader of the Democratic Party. He had been very interested in North Port redevelopment under the Roh administration as the Chief Presidential Secretary. He had emphasized that

I am a son of Busan. I was born and raised in Yeongdo⁵¹, Busan and grew up watching the North Port. The North Port redevelopment, which had begun by the Roh administration, will be completed by 2022, the end of the Moon administration (Kim, 2018a). [code: local context – political issue]

The North Port Redevelopment Project should revitalise a derelict former urban centre in Busan by creating tourism, cultural and maritime industries within a waterfront area. In particular, citizens of Busan should be the main actor of such changes (Kim, 2018b). [code: local context – economic and community issue]

In the 3rd conference which focused on strengthening the competitiveness of Busan port and Gwangyang port in 2005, both the Ministry of Oceans and Fisheries and the rest of the main actors⁵² reached an agreement that the North Port Redevelopment Project should be divided into two phases. The first phase is a period between 2008 and 2020, focusing on the regeneration of the central and four general harbours within North Port. Then, from 2020, the

⁵¹ Yeongdo is a borough in Busan, South Korea. It is a small island partly surrounded by North Port, located in the south edge of central Busan.

⁵² Busan Port Authority, Busan Metropolitan City, etc.

second phase will be conducted by regenerating two additional harbours (the fifth and sixth harbour). The two phases generally concentrate on the physical redevelopment of the practical port operation system of North Port such as the financial management system, the management system for the labourers and that for transported cargoes. The total area of the regeneration site would be around 1.51 million square metres with an investment of 8.78 trillion Korean Won (Table 6-3). The large-scale port regeneration project will be managed by Busan Port Authority on behalf of the Ministry of Oceans and Fisheries.

Major Aims	Resolve civil appeal and redevelopment of ineffective port facilities
Target Facilities	Conventional piers from number 1 to 4 & two passenger terminals
Area	1,511,450 m ²
Project period	2009 ~ 2020
Total budget	8.78 trillion Korean Won
Infrastructure	2.10 trillion Korean Won
Superstructure	6.68 trillion Korean Won

Table 6-3 The first phase of the North Port redevelopment project outline (source: Busan Metropolitan City, 2020)

Date	Major issues
Jul. 2007.	Confirmation of North Port Redevelopment Project master plan
Nov. 2007.	Designation Busan Port Authority as project operator / main developer
Jan. 2010.	Beginning the construction of a building site (1-1)
Jul. 2012.	Beginning the construction of the Busan Port International Passenger Terminal
Sep. 2013.	Announcement for amending the project planning
Dec. 2015.	Announcement for amending a work plan of the project
Dec. 2016.	Completion of a building site construction (1-1)
Mar. 2017.	Beginning the construction of large-scale hotels in the Central Business District (D-1)

Table 6-4 Phases of North Port redevelopment to date (source: Busan Metropolitan City, 2019)

The masterplan of North Port redevelopment was submitted to the central government for approval and presented to the President of South Korea in December of 2006 (Table 6-4). Several public consultations were held to share the idea of the redevelopment project and to discuss detailed agendas for the local community members surrounding North Port and citizens in the rest of Busan. In

June 2007, the North Port Redevelopment Project began with the Act on the Development and the Use of Harbour and its Adjacent Area⁵³. Through the reviewing and amendment process of the first master plan, the Ministry of Oceans and Fisheries announced the 1st Port Redevelopment Master Plan in October 2007. In this master plan, Busan Port Authority was designated by the ministry as the operator of North Port Redevelopment Project. Finally, in September 2008, the ministry officially announced the start of the North Port Redevelopment Project. The initial stage of the project consisted of specific urban planning, urban design, construction and mainly land reclamation. The large-scale urban regeneration project is still being implemented currently in 2020.

There are four main aims in the North Port project supervised by the Busan Port Authority (Table 6-5). Through the North Port Redevelopment Project, the South Korean government sought to create an international maritime tourism industry hub, to develop the North Port as a main gate of the Eurasia continent, to create a waterfront area for Busan citizens and to establish a typical model of Korean-style port redevelopment. Foremost, North Port is being developed as an international maritime tourism hub. Due to the aforementioned strengths of the Busan New Port, it was effective to transfer the industrial function of the North Port to the Busan New Port. The function of the North Port has been changed into the centre around the tourism industry. The redeveloped space includes several picturesque places (e.g. the waterfront area, the international passenger terminal, the international cruise terminal, a maritime culture complex and the opera house) that are particularly able to attract diverse types of visitors and tourists.

Moreover, Busan Metropolitan City government planned to develop the North Port as an important international transport centre. As the city of Busan is located in the southeast of South Korea, civil servants in Busan believed that the North Port area would work as

⁵³ This law was abrogated in 2009.

one of the main gates of the Eurasia continent. Through the strong connection between the maritime transport based on Busan Port International Passenger Terminal and the land transport based on Busan Railway Station, the North Port was seen to be capable of attracting travellers from across the world in the future. This would ultimately connect the city of Busan with global cities in the Eurasia continent. Diverse types of transport systems stated above enable the establishment of the integrated transport transfer services in Busan, as an important traffic hub.

Background		Aims of the project
<ul style="list-style-type: none"> • The necessity for restructuring the function of port facilities (for both ports) • Pressures for the development of waterfront area from citizens (Aiming to develop as the maritime culture city) • The necessity for integrating passenger terminals (Construction of Busan Port International Passenger Terminal) • Connecting with the adjacent urban area (Revitalising the function of urban centre) 	}	<ul style="list-style-type: none"> • Creating an international maritime tourism industry hub • Development of the North Port as a main gate of the Eurasia continent • Securing a leisure space by creating a waterfront area • Establishment of a typical model of the Korean-style port redevelopment (suggesting a distinguished port redevelopment model)

Table 6-5 Major issues of port redevelopment (source: Busan Port Authority)

Busan Port Authority has been keen to create a comfortable waterfront area in the North Port site based on Moo-hyun Roh's suggestion, who was keen to create a new urban space for citizens of Busan as the former President. The port authority planned to build several waterfront parks for citizens. Such space was expected to encourage citizens to spend time with their families and to enjoy their life in the urban centre surrounded by an eco-friendly built environment.

Lastly, the North Port Redevelopment Project has become a typical model of the Korean-style port redevelopment. In particular, Busan Metropolitan City government has used it as the best example regarding the concept of port redevelopment and has promoted the circulation of this idea across the world. The idea of sustainability

The Minister of Oceans and Fisheries has been responsible for the establishment of the Port Redevelopment Master Plan. The minister made an official announcement of the master plan. The plan has been able to amend every five years through public consultation and a central committee review. Qualified developers for the port redevelopment applied their applications directly to the Minister of Oceans and Fisheries or to the city mayor who was able to forward applications to the minister for approval. The detailed procedures of

the establishment of the master plan is described on Figure 6-4.

Under the Port Redevelopment Master Plan, the South Korean government was keen to conduct an urban regeneration of North Port with its adjacent area by creating and reviewing relevant policies and political restrictions, strictly managed by the Port Act.

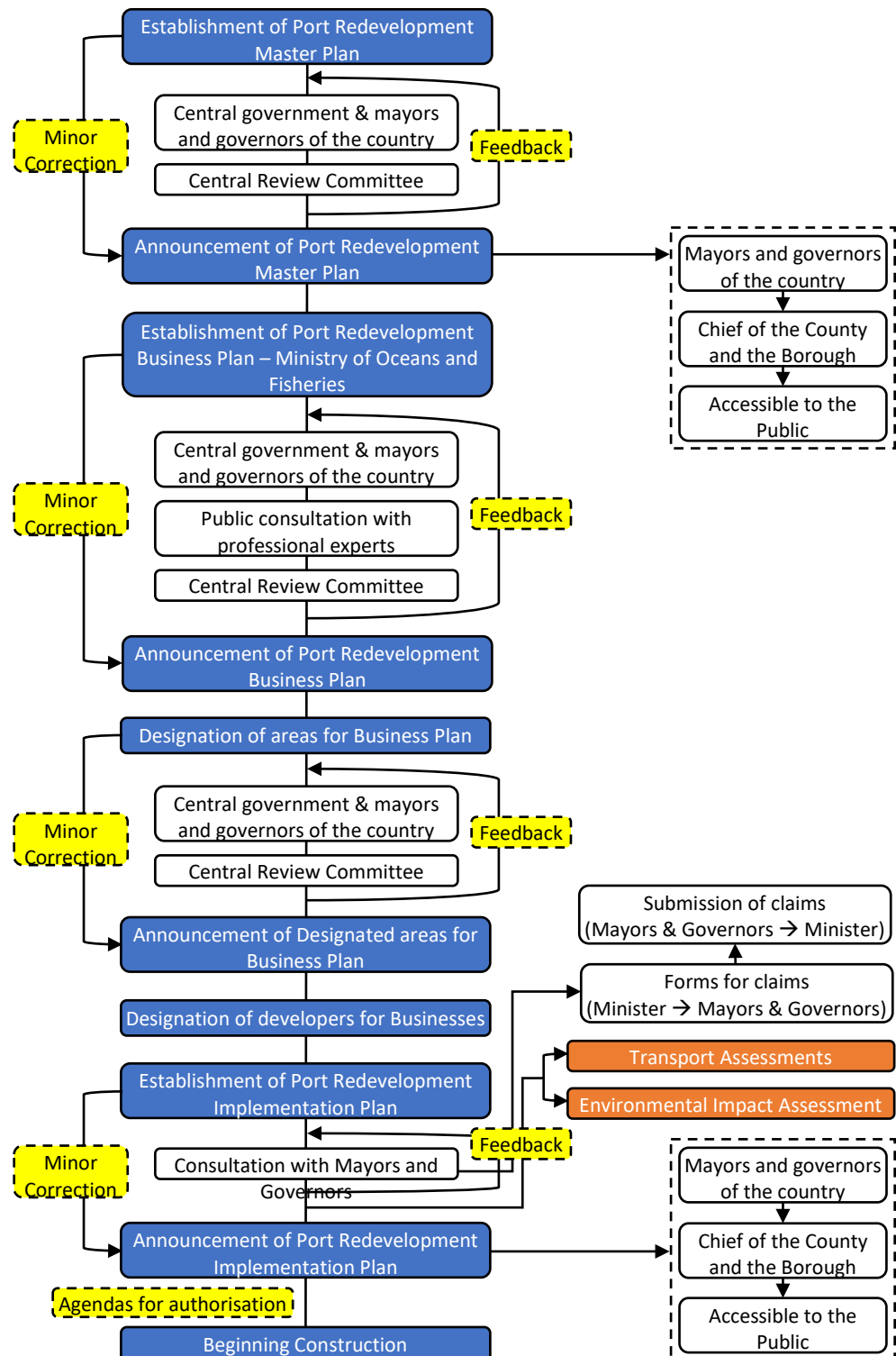


Figure 6-4 Decision-making process for the Port redevelopment (source: Busan Port Authority; revised by author)

The question that arose was: How can the Busan Port Authority raise funds for the implementation of such a large-scale urban regeneration project? Through the experiences of civil servants in Busan Metropolitan City from the Centum City project, Busan Port Authority attempted to secure sufficient funds as the most significant criterion for the success of the large-scale urban regeneration project.

Honestly, in my perspective as a main operator in the North Port Redevelopment Project, the most significant aim of the North Port Redevelopment Project was to become a profitable business model. I don't know exactly about the meaning of sustainability, but I am sure that nothing would be achieved if the project failed. In this context, we have endeavoured to secure a good financial condition with a very strategic business plan to avoid financial distress that we saw in the Centum City project (Interview with an officer of Construction Planning Department of Busan Port Authority, 2019). [code: local context – economic issue]

Busan Port Authority conducted a critical analysis for economic feasibility on the North Port redevelopment. Busan Port Authority assumed that the land will be sold at a very reasonable price, the same level of construction costs, and applied 7.5% of the social discount rate⁵⁴ in the process of estimation. Through the result of the economic feasibility analysis (Table 6-6), the outlook was that the North Port Redevelopment Project would not be profitable if the port authority did not receive any financial support. Basically, the North Port project included a development plan for a large area of green space with several waterfront walkways and parks. This reflected the President's suggestion that the waterfront area should be available

⁵⁴ Social discount rates are used to put a present value on costs and benefits that will occur at a later date.

for citizens' use. However, such green space accounted for over 53% of the total redevelopment area so that Busan Port Authority was able to sell only around 39% of the total area (553,000 m²) to private firms. This circumstance made it difficult for the port authority to secure economic feasibility. However, the estimated economic implications of the regeneration project on the local economy and local tourism industry were scored very high. Based on this background, Busan Port Authority planned to attract financial investments from both the public and private sectors to form at least 20% of the total investment on the project.

	Support X% of investment			
	0%	20% (KRW 2.69 tril)	30% (KRW 4.33 tril)	40% (KRW 5.47 tril)
Net Present Value	- KRW 123.0 bil	+ KRW 125.0 bil	+ KRW 135.0 bil	+ KRW 216.5 bil

Table 6-6 Economic Feasibility Analysis (source: Busan Port Authority)

Busan Port Authority also utilised diverse methods for securing funds. In terms of the urban infrastructure construction, the port authority decided to use a method of 'payment in substitutes.' This method enabled the Busan Port Authority to sell the ownership of a specific part of the land instead of paying construction costs. It was able to secure investors in advance, before the construction process, so that the port authority did not need to be distressed by the pressure of payment. However, the port authority needed to consider the risk of privatisation of the redevelopment project.

Since Busan Port Authority decided to sell only around 39% of the total area to private firms, we were concerned whether the large amount of fund necessary for port development could be secured. However, the BPA persuaded us that there were various ways to secure enough funds for port development. As it is a large scale development, we are still concerned about the economic feasibility but

*there has not been any specific economic risks yet
(Kim et al., 2014). [code: local context – political and
economic issue]*

When it comes to the superstructure construction, building a skyscraper or a landmark, the pre-financing method was chosen. In the South Korean context, to construct a large-scale building, developers usually sold the ownership of the property within the building before construction. This encouraged the private sector to invest in profitable properties excluding public facilities within the urban regeneration project. Funds acquired from such investment can be used for construction costs and development of the superstructure. However, the pre-financing method was usually dependent on the global or the national economic status. To avoid a global economic crisis happening in Centum City project, the Busan Port Authority set a strategy for attracting both domestic and global investors. This will be discussed in the next part, an account regarding international investors.

International Dimension within the North Port redevelopment

The background and progress of the North Port Redevelopment Project so far have been explored. During the last 13 years, however, few of the plans were completed within the North Port: land reclamation, the establishment of zoning plan and the construction of the Busan Port International Passenger Terminal. Residential buildings within the redevelopment area were constructed by GS group, a private construction firm, in early 2019.

This chapter will narrate the process of international threads surrounding the North Port, particularly regarding the completed plans or constructions. Although it cannot describe the whole saga of the development project since it is still being implemented and has not reached completion, it is enough to connect the process between what of the international pieces and what of the domestic influences

were under the theoretical framework of policy mobility. In this context, three main issues, the implications of international best examples at the initial stage of the planning process; the role of international investors on the project; and the impacts of round table based on field trips across the world, will be investigated.

Dubai & Sydney case: Between global imaginaries and best practice

At the very start of the North Port Redevelopment Project, the most important task for the Busan Port Authority was to decide a role model of the development project. Since Roh's administration asserted that Busan Metropolitan City needed a waterfront area where citizens could enjoy their life near their home, Busan Port Authority attempted to learn a specific theme or concept of port/waterfront redevelopment from global cities.

The project was the president (Moo-hyun Roh)'s dream⁵⁵. The president was keen to kick off the project during his incumbency. This means that we had to designate a role model from global cities, which shortens the period of planning process and secures guaranteed outcomes through the consumption of a huge amount of resources (Interview with an officer of Construction Planning Department of Busan Port Authority, 2019). [code: circulation of idea – best example (model of new urbanism) / local context – political issue]

Through fieldtrips, case studies and consultations among civil servants, urban planners, architects, and academia, the port authority provisionally chose two models, Dubai and Sydney model,

⁵⁵ The president believed that the North Port redevelopment will improve Busan citizens' quality of lives and revitalize the local economy as well as the built environment. It will have to be a great opportunity for the future of Busan.

among the five best examples⁵⁶ in the world (Busan Port Authority, 2007, Busan Port Authority, 2010). The chosen two international ideas have their unique concepts. Regarding Dubai, it aimed to be a profitable urban model with creative ideas and large investments developed by the central government of the United Arab Emirates. On the other hand, the main purpose of the Sydney model was to develop an urban area for citizens. Sydney Harbour Foreshore Authority (SHFA) endeavoured to change the derelict port area into an attractive space for citizens with several green spaces, good amenities and landmarks.

Busan Port Authority originally planned to follow the Dubai model to maximize the profitability of the Busan Port Redevelopment Project (Busan Port Authority, 2007). Foremost, the authority concentrated on Dubai model's initiatives for attracting public and private investment into the city by using its unique design of large-scale land reclamation and beautiful skyscrapers. The city of Dubai improved its brand awareness through the invitation of celebrities to a variety of mega-events and the use of phrases 'the best, the first, and the biggest' in marketing. By attracting global firms to the global showcase, the United Arab Emirates (UAE) government was able to increase its credibility for the investment across the world. The institutional support of the local government in this context was also paid close attention to by the Busan Port Authority. The local government in Dubai created a specific policy, the so-called 'Open Sky Policy', to attract international capital investments. Under the policy, a business-friendly circumstance was established by guaranteeing foreigners' land ownership and land lease. The local government attracted and supported personal and corporate investors through the exemption of income tax, corporate tax, value-added tax, and the imposition of 5% customs duty. The local government created the Free Economic Zone to promote

⁵⁶ Battery Park City, New York, U.S.; San Francisco, U.S.; Dubai, United Arab Emirates; Darling harbour, Sydney; and Minato Mirai 21, Yokohama, Japan

multinational corporations to join the port/waterfront redevelopment project as well.

In addition to the local government's support, the UAE central government restructured the public transportation system and introduced a light rail transit to reduce traffic congestion caused by rapid urban development. Furthermore, it supplied sufficient social housing to stabilise housing prices for the lower-income group and supported labour markets to resolve the shortage of labour. This led to the improvement of labour productivity as well as the increase of workforces. The central government also prepared a long-term business model. A large-scale development project usually needs more than 15 years for the completion of the project. If such development included a reclamation process such as the Dubai model, it would take more time. So, as a supervisor of such a long-term revenue model, the government made efforts to consistently maintain the number of visitors and tourists who can spend their money on the local community. This was arguably achieved through hosting mega-events, executing marketing strategies and investigating the visitor consumption patterns and their level of satisfaction.

However, when the project was presented to Moo-hyun Roh, the former President of South Korea, he refused to follow the Dubai model with the following comment. Thus, only some significant issues regarding the investment of the Dubai model could be used in the North Port Redevelopment Project.

What are the benefits for Busan citizens if North Port will be developed as a Dubai model, which attracts a huge amount of investments, under the name of commercial and property-led development? I believe it would be better to create a comfortable waterfront space for citizens to enjoy their life in the developed space – it is located in the urban centre though. The citizens of Busan need a really comfortable and

convenient space in which they are able to visit with public transportation whenever they want, with a very comfortable dress code (Kim, 2018b). [code: circulation of idea – best example (model of new urbanism) / local context – political, economic and community issue]

The president's suggestion encouraged Busan Port Authority to change the initial plan to follow the Sydney model. The leader of Busan Port Authority regarding North Port redevelopment added the following words.

Actually, we have collected a huge amount of information from across the world. The North Port redevelopment is not only the first port redevelopment project in South Korea, but also an iconic project of the city of Busan. It has to be a success. So, the most important point of the North Port Redevelopment Project for us was profitability (Dubai model – concentrating on economic outcomes). However, the former president's suggestion encouraged us to focus on the citizens' lifestyle within the new waterfront area (Sydney model – concentrating on social outcomes). I think this has become a watershed of this project (Interview with former officer of the North Port Redevelopment Project of Busan Port Authority, 2018). [code: circulation of idea – best example (key concept of urban regeneration) / local context – economic issue]

Consequently, in 2010, Busan Port Authority visited the headquarters of SHFA in Australia to discuss and learn from their experiences and strategies for port redevelopment. Starting from the 1970s, the local community in Sydney strongly argued for the necessity of port redevelopment and finally in 1984, the regeneration project was

begun. To prepare for the 2000 Summer Olympics in Sydney, the SHFA built a convention centre with a slogan, 'Bring the Darling harbour back to the citizen'. The purpose of the redevelopment was to create a people-friendly space, to connect the central business centre with the adjacent local area and to secure the profitability of the regeneration project.

The Sydney model has been evaluated as a very successful regeneration project. The income of the convention centre is more than 7.5 million Australian dollars annually (Busan Port Authority, 2010), and it attracts around 1.4 million visitors from across the world every year (63% of visitors are from domestic areas and 18% are from global regions). Moreover, the tourism industry was created around the redevelopment area through construction of the Harbourside Shopping Centre and various types of hotels such as Novotel, Ibis, and Grand Mercure. Bob Deacon, the former executive director of property and asset management services, commented,

There were several reasons for the success of the project. Both central and local governments strongly supported the redevelopment project in the long-term. They supported the project not only economically but also socially by managing the local community. As the main developer, SHFA was trying to secure long-term economic sustainability by investing and managing current facilities – e.g. for improving water quality with the establishment of a strict guideline – with proper programmes. SHFA was a flexible organisation which was able to respond to local and regional requests promptly. These were what we have done for the last three decades under the title of sustainable urban regeneration (Busan Port Authority, 2010). [code: circulation of idea – institution / local context – economic and community issue]

Seeking urban sustainability, SHFA attempted to maintain the ratio of public and private investment. Since the main aim of the project was to provide citizens with a diverse function of spaces, such as leisure, recreation, education, exhibition, and tourism, and maintain social sustainability, the government made it mandatory to secure sufficient public space against private investors who were keen to develop the space privately. Such limitation of private investment was conducted through the detailed guidelines and restrictions for urban planning, land use design and building construction.

The profitability of the project was very important for us. However, it was not the priority of the project. If something hampered us from achieving our prior aim, it should be modified promptly whatever it was. For instance, Darling Walk Shopping Centre established in 1990 obstructed citizens' accessibility to the green space with poor profitability at that time. So, it was destroyed and the new guideline for the improvement of citizens' accessibility was introduced. Under the new guideline, all parks and waterfront walkways surrounding the harbour were inter-connected and waterfront areas were filled with cafeterias, restaurants and open spaces for the public. We were so proud of such experience (Busan Port Authority, 2010). [code: circulation of idea – institution and regulation / local context – environmental and community issue]

SHFA also suggested some significant issues to civil servants of Busan Metropolitan City as a consultant during the meeting.

You should remember that the most important thing is constant management of the project, rather than the implementation of redevelopment itself. You should analyse the visitors' information constantly to maintain the number of visitors. Furthermore,

organising a special event or constructing a landmark should be strongly recommended. For example, if you create a green space on the regeneration site without consideration of the local context, it would be isolated. To prevent such a situation, you should make a periodic event or an iconic facility within the development project which can gather regular visitors (Busan Port Authority, 2010). [code: circulation of idea – institution / local context – environmental issue]

Consequently, the Sydney model was a representation (Temenos and McCann, 2013) of a successful port redevelopment project and became one of the global imaginaries (Peck and Theodore, 2010) to Busan Port Authority. Thus, some programmes within the Sydney case were applied to the North Port redevelopment. Firstly, Busan Port Authority tried to create a new city image. The new image could improve the city brand awareness which could become a tourism resource in the future. Hence, as one of the landmarks, the port authority constructed the Busan Port International Passenger Terminal (Heerim Architects & Planners, 2012)(Figure 6-5). Since there were no modern style facilities within the redevelopment site, Busan Port Authority expected that such buildings could attract several domestic and global visitors. Furthermore, similar to the Sydney Opera House, green building technology was planned to be adopted in the terminal. In detail, the Korean-style green building certificate (G-SEED⁵⁷) was adopted. The building has achieved the 'Excellent' level of green building certificate by using passive design (particularly using renewable energy) and active systems such as reusing greywater, automatic power-saving mode, and using LED lights.

⁵⁷ In South Korea, since June 2013, all building (over 3,000m² of total floor area) constructed by the public sector has to achieve 'G-SEED', which is a green building certification system (a South Korean version of BREEAM).



Total Budget	Opening	Wharf		Terminal Building	Est. Yearly Passengers
KRW 272 billion	Aug. 2015	Type	Quantity	5-storey building 92,826 m ²	2.8 million
		Cruise	1		
		Passenger	5		
		Speed	6		

Figure 6-5 Busan Port International Passenger Terminal (source: Busan Port Authority)

Secondly, based on the land use planning of the Sydney model, Busan Port Authority attempted to create North Port as an eco-friendly space for residents and Busan citizens (Busan Port Authority, 2017b). This approach was also impacted by the legacy of the Centum City project.

In the Centum City, the area of the park is quite large but the park is completely isolated. It was only used by local residents and Centum City visitors could not take full advantage of it. The North Port Redevelopment should avoid such issues (Oh, 2017). [code: circulation of idea – legacy from the past / local context – environmental and community issue]

Although Centum City has a large-scale park, it was not utilized well due to its isolated location with limited accessibility. Similar to Centrum City, Busan Port Authority planned to create large green spaces within the North Port area. However, such spaces were not

inter-connected with each other, so Busan Port Authority added pedestrian roads for the purpose of improving citizens' accessibility. The roads were also connected with the waterfront side like the Sydney model. Finally, the diverse size of green spaces and landscape gardening was planned to be created through the North Port regeneration (Figure 6-6).



	Name of parks	Characteristics
1	Nuri Park	<ul style="list-style-type: none"> • The largest park in the North Port redevelopment project • Community participation square • Popularise
2	Hae-numi Park	<ul style="list-style-type: none"> • Meeting Plaza • Park for pets
3	Theme Park	<ul style="list-style-type: none"> • Eco-friendly space for children • Waterfront area with planting
4	Four seasons Park	<ul style="list-style-type: none"> • Public space for events • Creating a flower garden
5	Memorial Park	<ul style="list-style-type: none"> • A monument for the port of Busan • Symbolic colonnade
6	Seagull Park	<ul style="list-style-type: none"> • Very small parks with seagull design monuments
7	Maritime Sculpture Park	<ul style="list-style-type: none"> • Outdoor space with symbolic sculptures
8	Digital Information Park	<ul style="list-style-type: none"> • Installing kiosk for sharing media/information
9	Hae-maji Park	<ul style="list-style-type: none"> • Lighthouse-shaped monuments
10	Dong-hae Walk Park	<ul style="list-style-type: none"> • Waterfront walkways for children
11	Waterfront Park	<ul style="list-style-type: none"> • Bicycle lanes which interconnects all parks

Figure 6-6 Planning for Parks (source: Busan Port Authority; revised by author)

Overall, such examples were interpreted as hybridisation and synthesis (Rose, 1991) or learning (Marsh and Sharman, 2009). Busan Port Authority endeavoured to combine resources of programmes in the Sydney model (e.g. Sydney Opera House) and to

invent new and effective domestic programmes (e.g. Busan Port International Passenger Terminal). Realistically, Busan Port Authority believed that the construction of an opera house was not appropriate for the city of Busan based on the local context because traditionally it was really difficult to run a cultural facility in Busan since citizens was not very interested in cultural life, unlike the capital city of South Korea, Seoul. However, since the idea of construction of a landmark was sufficiently acceptable, the port authority decided to build the Busan Port International Passenger Terminal. It should be examined as an efficient and effective policy outcome through a 'learning' mechanism within the knowledge and policy circulation process.

The international investors: actors as outgoing policy consultants

Compared to the Centum City project, the North Port attracted foreign investors actively. In the Centum City project, Busan Metropolitan city government tried to attract investors across the world when it played a role as a main developer of Centum City. However, there were no international firms that invested in the Centum City project because the city government had little experience in marketing strategy. Foreign investors were reluctant to spend their funds on the unprepared project. When it comes to the North Port project, Busan Port Authority also had to attract international investors because there was limited domestic investment, particularly due to the global financial crisis in 2009, as well as the central government support.

Then, how was the North Port Redevelopment Project impacted by international investors? This question will be answered through the analysis of the governance system of the North Port project. Through the case studies, the Dubai and Sydney models, that have been explained in the previous section, Busan Port Authority realized that international investors have a common preference for a singular developer system in their involvement of a large-scale tourism and property-led development. Busan Port Authority attempted to meet

such a preference in the North Port redevelopment process. As shown in the following diagram, in the singular developer system (Figure 6-7), the investors exchange the ownership of specific lands or properties within the port area with their investments by suggesting their own development strategies of the specific land or properties. They are given authority within the decision-making process of development, under the strict government guidelines for port redevelopment, as the only investor/developer of the specific land or property.

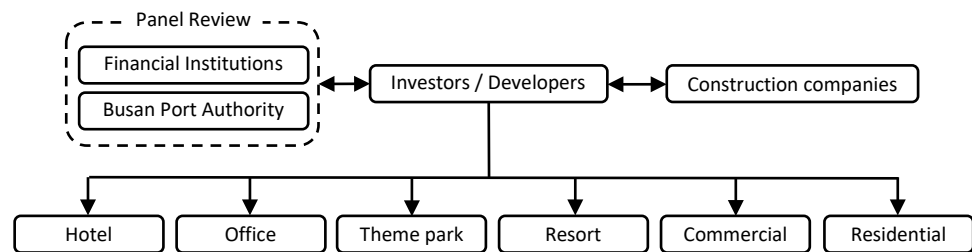


Figure 6-7 Prospective Investors' preferred development system – Singular developer system

(source: Busan Port Authority; revised by author)

In detail, Busan Port Authority sells a specific part of land to an investor, within the target group stated below, through a panel review. The panel review is supervised by Busan Port Authority and financial institutions and it investigates the potentiality of a project suggested by the investor. Then, the investor begins its plans (e.g. the development of hotel, office, theme park, resort, and commercial facilities) directly by itself as a developer, or indirectly⁵⁸. The developer cooperates with a construction company throughout the delivery of an individual project. This business-friendly environment in which private firms can supervise their own projects encouraged international investors to join the North Port Redevelopment Project. What is more, international investors' intention and purposes have impacted the planning process of the North Port project.

⁵⁸ International investors can make a contract with other local developers.

As the role of international investors is significant in port redevelopment, Busan Port Authority prepared a strategy to attract international investors (Figure 6-8). Based on the aims of the North Port Redevelopment Project, Busan Port Authority analysed the business environment surrounding the North Port project. When the port authority completed the articulation process of surrounding circumstances for investment, it also began to investigate the competitors' strategy of another city government (e.g. Gwangyang) which supervised a port redevelopment project to attract investment (Busan Port Authority, 2017b). This led to the scrutinization of case studies. Through the in-depth investigation process, Busan Port Authority created eight categories to measure the extent to which investors and their suggested projects would properly work in the North Port redevelopment. The eight criteria consisted of suitability of business for the port redevelopment, economic feasibility with enough profitability, publicity which should consider the environment surrounding the port, and requirements of the citizens, etc.

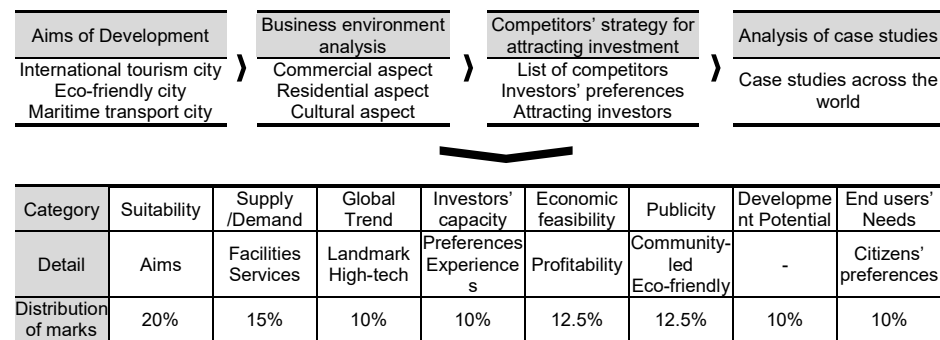


Figure 6-8 Strategies for attracting prospective international investors
(source: Busan Port Authority; revised by author)

To attract investors, we needed to set up our target groups. Foremost, such activity – targeting the proper groups – saved our time and effort for advertisement. Also, global investors had abundant experiences regarding similar types of development projects across the world. It helped us to follow a global trend based on their successful case studies.

So, we first established a type of standard to help choose a proper investor and then we had a private meeting to discuss the detailed plans. I believed this had an impact on the North Port redevelopment and it would be shown as a significant outcome of the project in the future (Interview with former officer of the North Port Redevelopment Project of Busan Port Authority, 2018). [code: circulation of idea – regulation and institution / local context – economic issue]

Based on strategies for attracting prospective international investors, Busan Port Authority defined specific districts and categorised target groups within such districts (Table 6-7). This process led to the allocation of prospective firms and investors into proper target groups. It took a long time to complete the allocation process, but it definitely improved the effectiveness of the port redevelopment project in the long term.

The allocation process was not easy at all. However, I can say several promising firms are interested in the investment in the North Port Redevelopment Project based on such allocation. In my opinion, they felt that the strategy and allocation seemed to be convincing. The allocation process is likely to be seen as a rather slow process since we had to manage huge amounts of information, experience, and networks for the process. Yet, I believe it contributed to the success of the North Port (Interview with former officer of the North Port Redevelopment Project of Busan Port Authority, 2018). [code: circulation of idea – key actors and their relationships / local context – political and economic issue]

Busan Port Authority still endeavoured to find the most appropriate investors that fit well in the port redevelopment by establishing additional strategies: facilitating domestic investors to attract international investors under the name of partnership; using a private network for attracting domestic investors; using a global trend, 'Green Marketing'⁵⁹, to create a good image of port redevelopment and hiring a professional team/programme to promote foreign investment, particularly from the private sectors.

District	Target Groups
Terminal Zone	<ul style="list-style-type: none"> • Experienced private firms who operate terminals • Cruise companies
World Business Zone	<ul style="list-style-type: none"> • Domestic & International commercial developer in particular, regarding offices, business hotels, and exhibition centre • International educational institutions
Live Entertainment Zone	<ul style="list-style-type: none"> • Private firms involved in media and film industry • Management/development firms for entertainment
Multi Use Zone	<ul style="list-style-type: none"> • Developers for aging population industries (e.g. hospitals, senior care centres, etc.) • Developers for shopping centre (fashion) • Management/development firms for hotels & resorts
Ocean Culture Zone	<ul style="list-style-type: none"> • Management/development firms for local traditional culture • Development for theme parks
The Others	<ul style="list-style-type: none"> • International developers from Europe and Japan

Table 6-7 Defining specific district with target groups (source: Busan Port Authority; revised by author)

By using such diverse strategies, Busan Port Authority has focused on attracting international investors particularly for the development of the Ocean Cultural Zone (Table 6-7). The zone will consist of space for mixed-use development and a landmark, which maximises business profitability within the North Port Redevelopment Project. Technically, GS Consortium had a responsibility for the development of the Ocean Cultural Zone by managing the master plan and the construction process within the zone as a main developer. However, the original plan which was created by GS Consortium on behalf of Busan Port Authority was cancelled due to the impact of the North Port redevelopment roundtable – this will be explored in the following

⁵⁹ Creating an image of eco-friendly port redevelopment, providing citizens with competent service, and minimising the adverse effect on the development process

section. Consequently, Busan Port Authority decided to provide international investors with authority for the development of specific areas in the Ocean Cultural Zone. In this context, several international investors were interested in participating in the North Port Redevelopment Project (Busan Port Authority, 2017b).

The investors impacted the amendment of the Act regarding the tourism industry and guidelines within the master plan of North Port redevelopment during negotiations with Busan Port Authority regarding the development of specific areas in the Ocean Cultural Zone (Busan Port Authority, 2017b). Foremost, Busan Port Authority sought to create a cruise industry in the local area based on the newly built passenger terminal. However, most international developers were keen to invest in the tourism industry, including casinos, hotels, shopping and services (Table 6-8), since the business profitability of the tourism industry is higher and more stable than that of the cruise industry. Thus, Busan Port Authority changed its original plan by focusing on developing the tourism industry rather than the cruise industry.

Firm	TANTAN	HUAXIN FUTAI	KINGS group	Melco Resort & Entertainment	Global Project Capital
Nationality	U.S.	China	China	U.S.	U.K.
Date	11. 2018.	11. 2018.	8. 2018.	2. 2018.	12. 2018.
Place of interest	Ocean & Cultural	Ocean & Cultural	Ocean & Culture World Business	Ocean & Culture	Ocean & Culture
What they would expect	Landmark	Cruise business Tourism industry	Cruise business Tourism industry Private contract	Tourism industry Entertainment	Partnership Landmark Private contract
What the locals want	Detail planning Short-term plan Long-term plan	Building a resort	Prefer to make a contract with institutional support	Building a resort	Prefer to make a contract with institutional support

Table 6-8 Meetings with prospective international investors in 2018 (source: Busan Port Authority)



Figure 6-9 Seminars and site visits for investors (source: Busan Port Authority)

Furthermore, to attract large firms that have the potential to be an investor with sufficient funds, experience and reputation regarding the tourism industry, Busan Port Authority endeavoured to make a business-friendly circumstance through deregulation (Figure 6-9). For instance, KINGS group, Melco Resort & Entertainment and Global Project Capital asked Busan Port Authority about changing the development area into a Free Economic Zone to avoid paying huge amounts of tax. The authority shared this request with the Ministry of Oceans and Fisheries and the ministry promised to accept the firms' request in 2020. Moreover, the company KINGS group and Global Project Capital requested a deregulation for the development of the tourism industry. South Korean citizens cannot access casinos except for a designated one authorised by the central government. Yet, since casinos are one of the most profitable areas within the tourism industry, such regulation is a huge obstacle for investors to operate their businesses. One of the investors suggested the establishment of a treatment programme for gambling addicts if Busan Port Authority helps to ease the regulation. Currently, the Ministry of Oceans and Fisheries, on behalf of Busan Port Authority, is cooperating with the Ministry of Culture, Sports and Tourism to resolve this issue (Busan Port Authority, 2018).

We are still cooperating with other government arms to attract international investors. Deregulation is part of such cooperation even though the acceptance of deregulation is a very difficult issue in the South Korean urban planning and architectural field
(Interview with an officer of Construction Planning

*Department of Busan Port Authority, 2019). [code:
local context – political issue]*

Investors also influenced contracting methods in the planning field. Under the Urban Planning Act and Building Act, public organisations cannot make a contract with a single company privately. Accordingly, Busan Port Authority had to make a contract with investors through a bidding process. In detail, when an investor decides to build a landmark within the Ocean Cultural Zone, it has to win the design competition for the landmark, otherwise the investor cannot be involved in the project at all. Large global firms such as the company Melco Resort & Entertainment and Global Project Capital wanted to avoid such risk. So, they claimed that they would invest in the North Port Redevelopment Project if they could sign a contract privately. The two big investors' suggestions were quite helpful to maintain the North Port project's profitability both in the short-term and long-term. Thus, the port authority is considering this issue seriously even though it is a severe burden for the port authority to amend the relevant ordinance as well as the guideline within the master plan.

In summary, international investors played a role as outgoing policy consultants (McCann, 2011). Based on abundant experience and knowledge regarding tourism industry development, international investors have a high reputation across the world (Werner and Strambach, 2018). Busan Port Authority was keen to rely on such a reputation in order to reduce risks within a large-scale urban regeneration project. Since the port authority is a government agency, it is a severe burden for the authority to manage a huge budget for the port redevelopment. Also, a government agency would like to avoid responsibility for unproductive outcomes. Hence, Busan Port Authority sought to avoid such risks by making a contract with highly reputable international investors and developers. Due to the participation of such highly reputable investors, Busan Port Authority also expected additional investments by other developers.

Meanwhile, the investors and developers led the discussion with Busan Port Authority based on their knowledge and expertise (McFarlane, 2009). The reputation and knowledge of the investors became a type of power which affected the amendment of local regulations, such as Acts, local ordinance, master plan, and guideline, to create a business-friendly circumstance like Dubai, China and the United Kingdom. Rather than being voluntary (voluntariness), the initiative to amend local regulations was forced (coercion) upon Busan Port Authority by international investors (Dolowitz and Marsh, 1996). So far, the amendment has not yet been decided. However, such initiative itself has significance over the implementation of the North Port redevelopment because conventional local regulations could be changed by external experts and international investors, who act as outgoing policy consultants.

Roundtable: the effectiveness of micro space for policy mobility

Compared to the previous empirical case study, the most interesting point in the whole process of the North Port Redevelopment Project is the role of the North Port redevelopment roundtable. During the Roh years (February 2003 to February 2008), the Roh administration always stressed the importance of community participation on national issues both politically and socially. The North Port redevelopment roundtable was the epitome of such a tendency. The roundtable contributed to the change of private firms' development-led plan into a human-led and citizen-led plan.

To explore the implications of the roundtable on the project, a brief background should be provided in advance. At the initial stage of the port redevelopment, Busan Port Authority needed a private firm who can play a role as the main developer. On behalf of the Busan Port Authority, the main developer was expected to create a master plan including designing a land-use plan with a plan for the construction of buildings and relevant urban infrastructures. In 2009, however, due to the global financial crisis from the U.S., many domestic developers

who focused on construction struggled in the crisis and were unable to invest in such a large-scale development project. In this context, no private firms applied to be the main developer of the North Port redevelopment. As a result, Busan Port Authority extended the application due date for main developer candidates with additional conditions, providing the main developer with the authority to change the land-use plan. Finally, GS Consortium submitted its application with no competition and the firm was selected as the preferred bidder for the development. GS Consortium consists of three major construction firms in South Korea, GS Engineering and Construction, Daelim Industrial (Engineering and Construction), and Hyundai Engineering and Construction. On behalf of the three Korea-based global EPC (Engineering, Procurement, Construction, and Commissioning) contractors, GS Engineering and Construction had the responsibility as the main developer (Busan Port Authority, 2017b).

Busan Port Authority announced a final version of the master plan for profit-led development designed by GS Consortium (Figure 6-10). Many complaints were raised from a variety of professional fields in Busan. Some experts argued that the suggestion did not fully consider the history of Busan Port, the inter-connected way between the former urban centre and the North Port redevelopment site, and Busan's citizens. Nobody was satisfied with the outcome. In particular, the private developer's idea did not convince citizens because citizens already experienced the negative outcome of such a profit-led development plan through the Centum City project. This context encouraged citizens to create a type of organisation which was officially able to protest against the developer as well as the Busan Port Authority. The first action of this approach was holding a meeting amongst the four main social work organisations in Busan: Citizens' Solidarity for Participation of Busan, Green Korea in Busan, Korea Federation for Environmental Movement in Pusan, and Young Men's Christian Association in Busan. In this meeting, the four social work organisations reached an agreement that the governance

system for policy making process within North Port redevelopment should be changed from the top-down approach to the bottom-up approach as a citizen participation focused process.

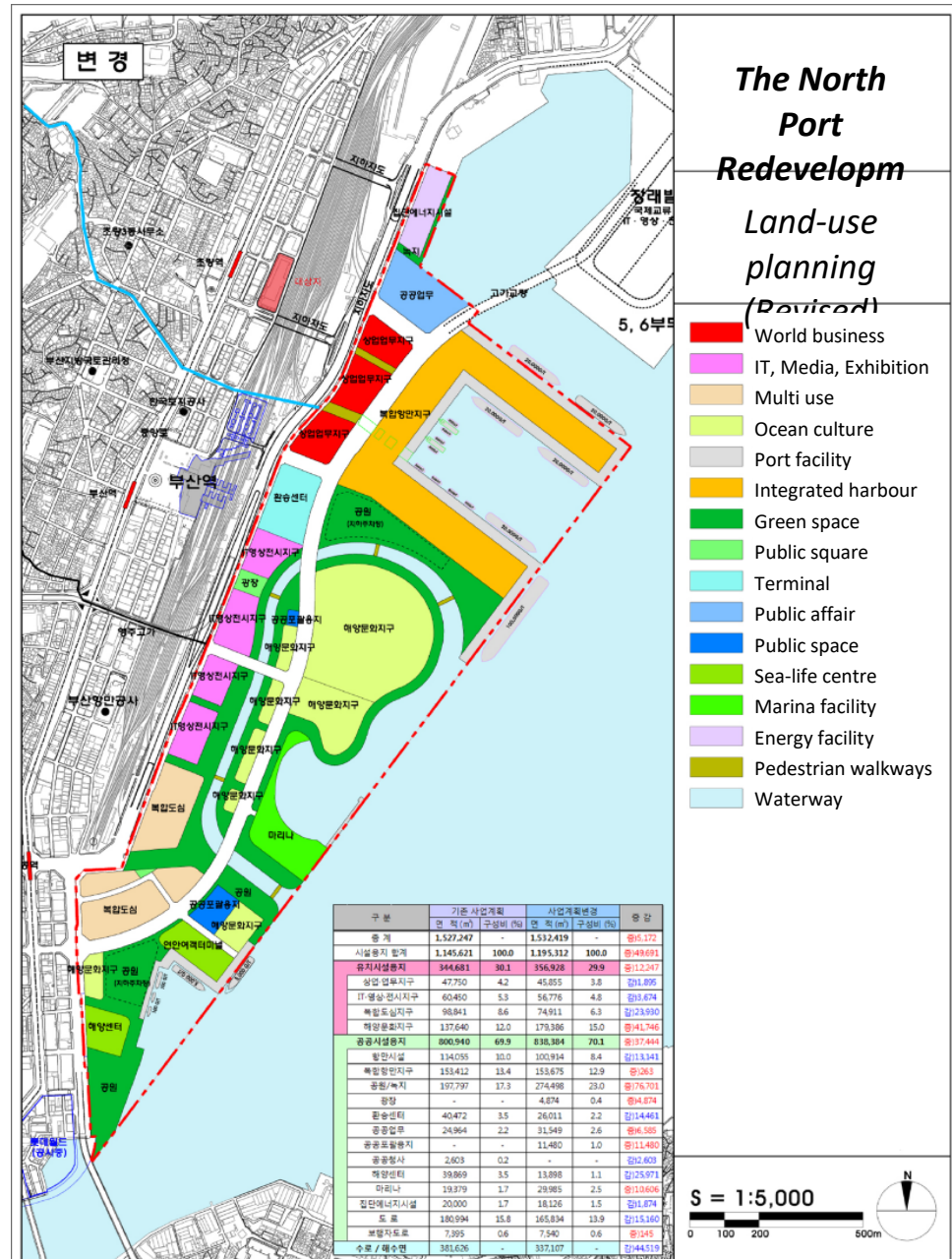


Figure 6-10 Land use planning by categorised zone (source: Busan Port Authority; revised by author)

They asserted such an argument based on the following core reasons. Foremost, the final version of North Port redevelopment published by GS Consortium and Busan Port Authority could significantly reduce and lose the publicity of the project, one of the

main aims, because of private investments domestically and internationally. Secondly, to secure lucrative businesses in the development project, the North Port and its adjacent area will become a business-friendly space instead of a citizen-led, green space which was the main purpose of the project (Busan Port Authority, 2017b). Thus, they suggested two alternatives to protect the original aims and visions of the North Port Redevelopment Project and to respond officially against the developers' opinion: creating an independent citizen-led organisation on the basis of arts and cultural organisations and creating a type of roundtable which allows citizen representatives to intervene in the process of establishing the master plan.

Through additional discussions between social work organisations and Busan Port Authority, agreement was reached about the establishment of a Roundtable. However, there were a few conflicts about members of the Roundtable and its authority. At the initial stage, it was expected that the Roundtable would consist of the Ministry of Oceans and Fisheries, Busan Port Authority, Busan Metropolitan City, professional urban planners, local artists and social work organisations. Yet, it was not achieved because there were some people who asserted that the Roundtable would become a perfunctory governance system if the Roundtable members mainly came from the public sector. Consequently, only Busan Port Authority was able to become a member of the Roundtable on behalf of the public sector. Furthermore, citizens were keen to have an executive authority within the policy making process because they believed that their demands would be fully satisfied through such authority, but it was also denied by Busan Port Authority. The port authority strongly argued that the Roundtable should play a role as a consultant.

The North Port Redevelopment Project is for the citizens of Busan. If community participation is lost in the project, it would be recorded as a complete

failure. Thus, organizing a roundtable has great value since the main developer would be the Busan citizens, not private firms, civil servants, professional urban planners and designers. Thus, this social agreement must be respected over the implementation of the project (Yoon, 2012; cited in Kim et al., 2014). [code: local context – community issue]

Finally, the North Port Redevelopment Roundtable was organized in 2012. A group of experts were recommended from diverse fields, academia, social activists, urban planners and designers, by social work organisations. In addition to professionals, citizens within local communities were engaged in the Roundtable.

This organisation (the Roundtable) plays a role as a facilitator which delivers citizens' and experts' opinions to the BPA regarding the North Port Redevelopment master plan and various plans within the project so that such opinions can be reflected in the project. It consists of 36 professionals who participate in three sub committees. The steering committee is made up of three members from each sub committee and holds a Roundtable every month (Kim et al., 2014). [code: local context – political and community issue]

There were two generations of Roundtable and the first generation, who were chosen on the basis of their national reputation, was substituted with the second generation, who mainly worked for local area, depending on their performance within their period. The Roundtable was run from the 26th June 2012 to the 27th December 2012 and held more than 20 consultations, three workshops and four seminars before the announcement of the latest version of the

revised master plan. Three sub committees in the Roundtable, community participation for environment & welfare; urban planning & design; and culture, art and event (Table 6-9), also held more than four committee meetings respectively. In terms of community participation for the environment & welfare team, the team organized a citizen workshop and lectures to introduce the North Port Redevelopment Project. It also held a conference to discuss methods of private investment in the North Port project. When it comes to the urban planning & design team, it raised several agendas regarding land-use planning, particularly focusing on green space. For example, the commercialisation of green space was a main issue raised by citizens and this became a main agenda dealt in the Roundtable.

To prevent the commercialisation of the waterfront area, the location of Multi Use Zone was relocated to the outskirts of the project area. As a result, it was moved from the previously central location to a southward location (citizens in workshop; cited in Lee, 2012). [code: local context – political and community issue]

The group of culture, art and design strengthened the importance of cultural and historical resources within the redevelopment site. It also promoted a campaign for the conservation of historical resources.

The North Port is a historical space of Busan Metropolitan City where history of the port city has started since its opening in 1876. It should be protected from commercialisation (citizens in workshop; cited in Lee, 2012). [code: local context – political and community issue]

The North Port should be redeveloped while conserving the identity and history of Busan which it

holds (citizens in workshop; cited in Lee, 2012).

[code: local context – political and community issue]

Through these active performances of three different committees, both social work organisations and Busan Port Authority largely agreed and announced the latest version of the amended master plan even though development issues regarding the marina industry is an ongoing debate to date (Kim et al., 2014).

Department	Main roles
Urban Planning & Design (13 people)	<ul style="list-style-type: none"> • District unit planning, managing urban infrastructure • Design guidelines for every project • Developing methods for using traditional/cultural resources • Managing public facilities
Culture, Art & Event (14 people – 1 st gen/ 29 people – 2 nd gen)	<ul style="list-style-type: none"> • Managing architectural, historical, and art culture • Organising cultural/art programmes for community • Planning the operation of cultural space within the North Port site
Community Participation for environment & welfare (12 people)	<ul style="list-style-type: none"> • Managing facilities for the old people, women and disables • Improving community participation • Attracting private investment • Improving transparency/publicness throughout all businesses

Table 6-9 Three types of department (in the North Port redevelopment Roundtable) and their role

(source: Kim et al.; revised by author)

The external group was also invited into the Roundtable to share its experience and knowledge about port redevelopment. For instance, the North Port redevelopment upgrade team in the Korea Association of Marine Industry gave a presentation regarding space organisation for art and culture. The resources for the presentation were based on the external group's field trip to international cities such as HafenCity, Hamburg, Germany and Nanhui New City, Shanghai, China. Such cities were famous for their successful port redevelopment projects. As the leader of the upgrade team, Professor Chung from Korea Maritime and Ocean University proposed several key agendas, knowledge gained from HafenCity, Hamburg, Germany. He firstly focused on the concept of the port redevelopment in Hamburg as a sustainable city. He argued Busan Port Authority should articulate the concept of the North Port project clearly.

Civil servants regarded Hamburg as a sustainable city with several characteristics: a growing city (population and economy); an ecological city (green city); a business-friendly city; a global city; a research and development city; and a contextual city. To be a sustainable city, the civil servant believes that the city should develop new industries by attracting global companies. Also, derelict buildings and urban infrastructure should be replaced and the historical (port facilities) and ecological context (waterfront and green space) in the urban area should be preserved. These efforts lead to the new beginning of Hamburg (Interview with an academia at a national university in Busan, 2010).

Moreover, he strongly recommended two points: (1) the construction of a landmark, for instance, Elbphilharmonie Hamburg; (2) the promotion a local festival such as an urban architecture contest in Hamburg; and (3) the organisation of community participation in the decision-making process of the redevelopment project.

The main aim of the port redevelopment in HafenCity is to recover the urbanity and sustainability of the city. By connecting the historical and valuable urban context with a new urban centre as the combination of tradition and innovation, the HafenCity attempts to attract both visitors and residents (Interview with an academia in the field of urban design, 2010). [code: circulation of idea – best example (urban regeneration project with diverse programmes) / local context – community issue]

Through the Roundtable, in detail, the North Port redevelopment upgrade team claimed the increase of green and waterfront space within the development site, the reduction of vehicle roads, and the

abolition of GS Consortium's suggestion for creating a tourism and trade zone. They asserted that the North Port redevelopment site should be connected with the former urban centre and historical urban context, similar to the case study in Hamburg, through green walkways. Furthermore, they believed that the construction of Busan Opera House should also be abolished. Instead of the opera house, they preferred to build various types of outdoor facilities for local events to attract citizens and visitors. They argued that such suggestions would make a unique story of the North Port.

The Roundtable has been evaluated as a very valuable legacy of the North Port Redevelopment Project. Although it arose as a spontaneous idea during the planning process, it was reflected well throughout the project. Busan Port Authority joined the Roundtable as much as it could which led to positive outcomes. For instance, it was really difficult for GS Consortium to abolish its initial plan to create a tourism and trade zone, yet it did. Without Busan Port Authority's active persuasion, the Roundtable would have not worked positively at all (Kim, 2014; cited in Kim et al., 2014). [code: circulation of idea – legacy of the past / local context – political and community issue]

Such recommendations of the Roundtable significantly contributed to the amendment of the North Port redevelopment master plan. The Roundtable in the delivery of the North Port project can be seen as a 'globalizing micro-space' (Werner and Strambach, 2018). The face-to-face meeting, the Roundtable, consists of various representatives of authority, experts in a specific topic, and citizens who are local community members. Furthermore, the North Port redevelopment upgrade team, in particular, played a significant role in the meeting. As the upgrade team claimed their opinion regarding land-use planning after a field trip to Germany and China, the globalizing

micro-space might 'be recognised as nodes in globally stretched policy networks' (Werner and Strambach, 2018). For example, through the team's recommendation after the field trip, Busan Port Authority recognised global policies in Germany and was able to approach the global best practices easily. As a result, the historical culture park and the memorial park were added to the North Port master plan. The Roundtable could not resolve all conflicts between developers' perspective and the citizens' perspective. However, without 'nodes', global ideas and policies could not be reflected well on the local large-scale development.

This section has so far explored the extent to which international dimensions influenced the delivery of the North Port Redevelopment Project. Busan Port Authority utilised Dubai and Sydney models as the best practices and global imaginaries. Such global models helped the port authority to articulate the aim of North Port redevelopment. International investors played a role as main actors and outgoing policy consultants. Experience, knowledge and reputation arguably forced Busan Port Authority to amend local regulations according to the international investors' preference. Furthermore, the Roundtable can be seen as a globalising micro-space which directly influenced the implementation of the North Port project.

Conclusion

This chapter aimed to explore the delivery process of another large-scale urban regeneration project in Busan, the so-called North Port Redevelopment Project, from the initial planning stage to the ongoing implementation stage. Moreover, this chapter attempted to answer the question of 'to what extent do international dimensions in policy mobility impact the port regeneration project'.

Due to the deterioration of North Port and adjacent areas surrounding the North Port, Busan Port Authority endeavoured to

revitalise the port area, including the local economy, port facilities and urban infrastructure, through the implementation of a large-scale urban regeneration project. Moo-hyun Roh, the former President of South Korea, strongly argued that the redeveloped area should be mainly used for public purpose by citizens. This allowed only around 40% of the total area to be privatised by private firms. Compared to the Centum City project, Busan Port Authority attempted to set up a more concrete strategic planning and to secure sufficient funds for a large-scale development. In this context, there are three agendas based on the theoretical framework of policy mobility deduced from this chapter: (1) Dubai and Sydney cases: Between global imaginaries and best practice; (2) The international investors: actors as outgoing policy consultants; (3) and Roundtable: the effectiveness of micro space for policy mobility.

As the original best practice model, and as global imaginaries, for the successful North Port redevelopment, both Dubai and Sydney cases have impacted on the project significantly. With the strong support from the former and current President of South Korea, Busan Port Authority has conducted a large-scale port redevelopment under the slogan, 'Bring the port of Busan back to the citizens', similar to Sydney's model. To achieve such a purpose, the authority tried to apply SHFA's experience on the North Port project: building a landmark with the adaptation of green building technology, increasing the city brand awareness, connecting some green spaces with the local context (former urban centre), and holding round tables for in-depth discussion with the local community.

Regarding international investors, they also have impacted on the redevelopment project particularly through the negotiation with Busan Port Authority. Although the site construction process has not yet been completed in 2020, Busan Port Authority has endeavoured to attract international investors to secure sufficient funding. Since there were no domestic investors and developers that can spend a huge budget for the redevelopment project, the authority tried to

attract prospective international investors. However, through their experience and knowledge regarding the tourism industry across the world, the international investors asked the Busan Port Authority to consider deregulation, the amendment of local ordinances regarding the Port Act and the Urban Planning Act, and the introduction of a Free Economic Zone. These requests were definitely a burden for the port authority, yet the organisation could not ignore such requests and it is likely for the authority to accept such enquiries during the actual contract period in the future for the success of the port regeneration.

Lastly, the Roundtable, a globalising micro-space, played a significant role in the delivery of the North Port regeneration and affected the outcomes of the project. Diverse groups of members were able to join in the Roundtable and share global ideas and policies by using nodes in globally stretched policy networks. For instance, the North Port redevelopment upgrade team in the Korea Association of Marine Industry strongly suggested some agendas, e.g. constructing a landmark, fully using the historical context in the local area and attracting a new type of industry for the future, which were all successfully conducted in HafenCity, Hamburg. This encouraged the Roundtable to prohibit the main developer, GS Consortium, from focusing on profit-focused approaches in the North Port project.

Consequently, international dimensions and the interaction between international dimensions and the local context have impacted the North Port project significantly: as global imaginaries and best practice; as outgoing policy consultants; and as globalising micro-spaces. Furthermore, through this policy mobility process, the North Port Redevelopment Project has been developed in a sustainable way with four characteristics (Busan Port Authority, 2017b): (1) ameliorating a local economy; (2) improving the local residents' quality of life; (3) facilitating the use of port facilities in an efficient and effective way; and (4) creating a new city image.

The next chapter, as the last empirical case study, will examine the current large-scale urban regeneration project in Busan, called Eco-delta City, under the idea of a smart city. This will address the way in which Eco-delta City has been implemented; to what extent the knowledge and policy circulation process has been conducted; and to what extent the policy mobility has impacted on the first smart city project in South Korea. In particular, it also investigates the meaning of the failure of policy mobility, inappropriate transfer⁶⁰ (Stein et al., 2017) and its implications on the delivery of the smart city project.

⁶⁰ Inappropriate transfer may happen through insufficient attention which could 'be paid to the differences between the economic, social, political and ideological contexts in the transferring and the borrowing country' DOLOWITZ, D. P. & MARSH, D. 2000. Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance*, 13, 5-23.

Chapter 7 Empirical Chapter 3: Eco-delta City

Introduction

The two previous chapters explored the way in which urban regeneration projects have been implemented over time through the theoretical framework of policy mobility. The first empirical chapter, focusing on Centum City, concluded that there was an introduction of policy mobility. However, based on external circumstances, the strategically planned project had become a series of contextually modified projects. In this context, policy mobility partly occurred but its implications were somewhat limited. The second empirical chapter, focusing on the North Port redevelopment, on the other hand, demonstrated how the growing implications of international resources in the policy mobility were strengthened during the delivery of the urban regeneration project. International resources were international best examples/practices, international investors and citizens' opinion within a consultation after field trips to western Europe. Through the impacts of such international resources, it is concluded that policy mobility has actively occurred and the circulated knowledge and policy were usually the image and aim of the regeneration project which main developers, investors and a group of citizens had sought.

As the last empirical case study, the main aim of this chapter is to adapt the theoretical framework of policy mobility to the first smart city project in Busan, South Korea. Since the Eco-delta City project is currently under construction (e.g. land construction, creating urban infrastructures and setting up water resource management system), it is unsure the extent to which the idea and policies discussed in this chapter would practically work. However, the existing planning resources were abundant to analyse the level of policy mobility within the symbolic urban regeneration project. This chapter will address the way in which Eco-delta City has been implemented, to what extent the knowledge and policy circulation process has been

conducted, and to what extent policy mobility has impacted the first smart city project in South Korea.

In the 2010s, Busan Metropolitan City experienced other types of urban problems which were different compared to urban problems in the 1990s and 2000s. In particular, the city of Busan was confronted by an ageing community. This was caused by industrial restructuring and the decrease of the working age population. On the other hand, the urban centre was overcrowded by elderly citizens due to unlimited urbanisation. Consequently, the conventional urban industry has still become diminished and the congestion in the urban centre has been exacerbated. This tendency also contributed to traditional urban problems such as traffic congestion and environmental pollution. Furthermore, with the development of telecommunication technology and computer science, a demand for a new period in which society should prepare for the fourth industrial revolution (as the next generation of industry) had been created.

Politicians, civil servants, planners and academia in Busan, believed that the idea of a smart city is a panacea for the above-mentioned urban issues. They thought the idea of a smart city can not only resolve urban problems but also create the next generation of urban industry. In this context, there was an opportunity for the Korea Water Resources Corporation (K-water, the national government agency for comprehensive water resource management) to develop brownfield lands, a waterfront area along the Nakdong River in western Busan. Since the regeneration project was also an opportunity for the city government of Busan to develop the deteriorated area in Busan, Busan Metropolitan Corporation (the local government agency for developing an urban area within Busan Metropolitan City) decided to implement the regeneration project with K-water. In this vein, Eco-delta City, under the concept of a smart city, was finally begun.

Furthermore, as the idea of a smart city was attracting considerable attention from the South Korean government, the regeneration

project was designated as one of two national pilot smart city projects by the national government. Coincidentally, the Eco-delta City was supervised by both the central and local governments with a number of programmes and policies. Moreover, since there was a lack of information about the delivery of smart cities, main developers and civil servants in the central government endeavoured to learn best practices and initiatives from across the world. As there was an opinion that a smart city should be implemented by a bottom-up governance system, several initiatives and programmes which encouraged citizens to participate in the policy making process have been suggested throughout this learning process.

Again, Eco-delta City is the first smart city project in South Korea, and it has been basically implemented based on a number of case studies including policies, programmes and other initiatives from other contexts. However, compared to the previous urban regeneration projects, the delivery process of Eco-delta City is quite complicated. A number of actors, policies, programmes and events across the world were engaged during the implementation of the project. Thus, the Eco-delta City project will be interpreted and explored by the theoretical framework of policy mobility similar to the previous two empirical chapters. This chapter will investigate the policy mobility within a smart city by dividing it into three levels of approaches (global level, international level and local level) to address it effectively. By focusing on multi-level approaches for policy mobility in Eco-delta City, it enables us to explore the question of how the first smart city project was delivered in detail. Also, it describes how policy mobility occurred and the extent to which policy mobility has impacted on the smart city project. It assumes that there was a sophisticated version of policy mobility within the project, but the consequence of knowledge and policy circulation has become an inappropriate transfer, which can be interpreted as a new experimentation of policy mobility with innovation and failure.

The following part will illustrate the background of the first smart city project in Busan, with the three level approach for policy mobility: (1) global level approach for knowledge and policy circulation: collecting and adapting ideas from disseminated global trends regarding a smart city; (2) international level approach for knowledge and policy circulation: importing and exporting ideas based on international relationships; (3) local level approach for knowledge and policy circulation: local context which ultimately led to an inappropriate transfer.

Background: the 1st Korean smart city, Eco-delta City

Compared to the 1990s and 2000s, the city of Busan faced different types of urban issues in the 2010s. Foremost, South Korea was confronted with an expanding ageing community. The population of South Korea had aged on an unprecedented scale, driven primarily by the rapidly declining fertility rate. The fertility rate in the Republic of Korea, for example, has declined in the course of just one generation from 2.92 % in 1975-80 to just 1.23 % in 2010-15 (United Nations 2017; cited in Leeson, 2018, p.112). In particular, the city of Busan had become a super-aged society from an ageing society⁶¹ rapidly compared to the average period of becoming a super-aged society in other countries, even in South Korea (Table 7-1). Since 1996, the population of Busan Metropolitan City has decreased, and transformed into an 'ageing society' in 2002 with the lowest level of fertility in South Korea. In 2022, it is expected that the city of Busan will become a super-aged society. Such circumstance also illustrates the decrease of an economically active population (working age population) which leads to the shrinking and vacating of the urban area. Such changes ultimately damage the quality of citizens' lives. If such circumstances are maintained, many cities are at risk of

⁶¹ According to the United Nations, the proportion of a society's population that is comprised of persons aged 65 or older is called the 'aging rate.' If a society's aging rate exceeds 7%, it is an 'ageing society.' If the rate surpasses 14%, it is an 'aged society'; if over 21%, it is a 'super-aged society.'

disappearing in the long term (Ministry of Land Infrastructure and Transport, 2018a).

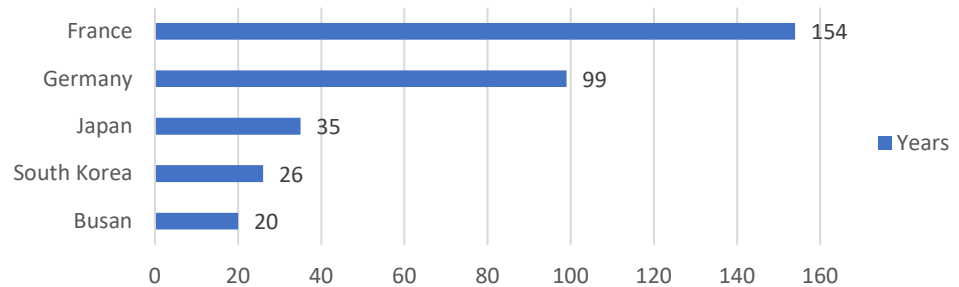


Table 7-1 Average period which would be taken for changing from an ageing society to a super-aged society by nationality (source: Busan Metropolitan City)

Whilst some areas shrunk due to the ageing community, other areas (particularly the urban centre) became extremely overcrowded due to unlimited urbanisation. As citizens follow the trend of convenient lifestyles and seek amenities, urban centre congestion has become one of the biggest urban issues in the current era. Such congestion contributes to a rapid deterioration of the urban infrastructure particularly regarding energy and transportation. For instance, in terms of transportation, South Korea has a very high ratio of vehicles to the country's total land area. Also, South Korea ranks 30th of 34 OECD countries for the rate of road space supply (Yeo, 2018). However, the national government is not able to supply more road space even though the national budget for traffic congestion, which is based on the cost of road traffic accidents and environmental costs, increases constantly.

Furthermore, a new agenda, the idea of a fourth industrial revolution had a great impact on the city of Busan as well as on the wider national scale in South Korea. In particular, due to the Google DeepMind Challenge Match⁶², the idea of Artificial Intelligence (AI)

⁶² A five-game Go match between 18-time world champion from South Korea and AlphaGo, a computer Go program developed by Google DeepMind (which was a UCL laboratory) was held in Seoul, South Korea in March 2016. It aroused significant attention among Korean citizens as a combat of 'human versus computer' by Korean citizens.

and machine learning attracted great attention from citizens of South Korea.

Citizens in South Korea experienced the fourth industrial first hand when Google DeepMind's artificial-intelligence program, AlphaGo, beat Sedol Lee, a previous Go World Champion and one of the strongest Go player in the world. Before then, it was widely believed that an AI strong enough to beat a professional player was still at least a decade away. However, all expectations changed through the match (Yoon et al., 2018). [code: local context – political issue]

Citizens attempted to use 'smart devices' based on AI technology to improve the quality of life surrounding them : the environment, education, transport and leisure activities (Lim, 2019). Since such ideas were paid close attention to by citizens, both the central and local government endeavoured to concentrate and invest in industries which were related in terms of a fourth industrial revolution. Regarding the built environment, they sought to create a high-tech industrial cluster, focusing on Information and Communications Technology (ICT) and the Internet of Things (IoT, within a smart city by establishing state-of-art buildings and urban design technology.

The local government of Busan Metropolitan City, thus, has struggled to overcome a rapid change into an ageing community and to meet citizen expectations for the new world. In the 1990s, the city government attempted to resolve urban issues by securing and revitalising urban infrastructures. However, such an anachronistic response can no longer resolve urban issues in the current era.

The city of Busan has been affected by the ageing community unexpectedly fast. People had not recognized seriously that it would become a significant social problem so soon. We should

approach this issue very seriously with a new methodology differing from conventional ones (K-water, 2018). [code: local context – community issue]

Due to the development of technology, citizens can find diverse alternative ways for urban infrastructure, amenities, and transportation. It is much more important for citizens to use such alternative services conveniently with a stable network connection. Thus, after the 2000s, the South Korean government promoted the development of 2nd generation new towns with smart city elements, the combination between U-City idea and advanced technologies (Lim, 2019). Civil servants and politicians expected that such advanced technologies would provide solutions to urban issues through reasonable space utilisation, efficient city management and vibrant industry activities.

Although the idea of a smart city was introduced in the 2010s, it was not a totally new one in South Korea. It was firstly mentioned during the implementation of Centum City in 2003 under the name of U-City (Ubiquitous City). The concept of U-City was defined as an urban space of the future, where ubiquitous technology is embedded into space so as to build urban functions more efficiently and consequently improve the quality of citizens' lives (Lee et al., 2008).

Actually, it (the idea of smart city) began by my suggestion under the name of U-City. Due to the successful delivery of Centum City, I believed that the city of Busan should prepare for the new urbanism era. However, since it required a great amount of funds, the city government could not support the project (Interview with former officer of Centum City Development Department of Busan Metropolitan City, 2018). [code: circulation of idea – legacy from the past / local context – political issue]

Arguably, a foreign media source published an article saying that the Busan Metropolitan City government created the first U-City master plan in the world (financial times, 2005; cited in Kim, 2016). The city government, at that time, designated Centum City area as a U-City test bed (Figure 7-1). Several devices and facilities were established within the area: an exemplary model for citizens within IoT technology-led U-City; the provision of IoT technology-based public services in the field of traffic control, environment and safety management and an international IoT technology hub. The central government (Ministry of Science, ICT and Future Planning) invested over \$12 million U.S. dollars on these projects. SK telecom, the largest mobile network operator in South Korea, also joined the project as one of the 20 coordinators.



Figure 7-1 Hae-un-dae (Centum City) U-City Test-bed project
(source: Busan Metropolitan City)

Relevant bills and laws institutionally supported the implementation of U-City projects. In 2008, the Act on the Construction of Ubiquitous Cities was enacted. The law was legislated aiming to supervise the construction of U-City effectively and efficiently by promoting sustainable development and balanced development. Such developmental concepts were expected to improve citizens' quality of life and the urban competitiveness (Ministry of Land Infrastructure and Transport, 2016). In 2009, the Ministry of Land, Transport and

Maritime Affairs (changed into the Ministry of Land, Infrastructure and Transport) published the 1st U-City Master Plan. It has been updated and revised every five years since 2009. Through the master plan, the South Korean government was keen to develop U-City industries as the next generation of growth machine and to provide citizens with a national level integrated long-term planning (Shin, 2013).

The 2nd U-City Master Plan was published in 2013 after revising a couple of details of the Act on the Construction of Ubiquitous Cities. The South Korean government investigated the outcomes of the 1st U-City Master Plan and found that the master plan concentrated on creating basic circumstances including infrastructures for the establishment of U-City. Under the 1st U-City Master Plan, there was a tendency to presume that the idea of U-City only impacted on the capital city and several metropolitan cities. Moreover, civil servants realised that there was a lack of strategies for exporting the Korean version of U-City model. In the 2nd U-City Master Plan, however, the national government focused on detailed strategies for the circulation of the Korean version of U-City project domestically and globally (Shin, 2013). Thus, the revised master plan suggested diverse incentives and programmes such as the expansion of the scale of a periodic event, U-City World Forum, and the establishment of an incubating facility for U-City professional labour.

Based on the 2nd U-City Master Plan, starting with Hwasung Dongtan U-City in 2003, 73 cities were developed by the South Korean government. Furthermore, the enactment of U-City legislation passed in 2008 (this legislation was revised into the Smart City Act in 2017), which encouraged 15 local governments to implement U-City pilot projects between 2009 and 2013 (Figure 7-2). Through the individual U-City project, both central and local governments defined 228 U-City services within 11 categorisations (e.g. transportation, security, environment, energy, administration, healthcare, etc.). Then, local governments applied such groups of technologies to their projects. For instance, some cities created the integrated city platform project

which enabled effective city management and efficient linking of varied local information regarding security and traffic. The national government aimed to expand the number of projects into 80 by 2022.



Figure 7-2 U-City projects in South Korea (source: Ministry of Land Infrastructure and Transport)

In the 2010s, the fourth industrial revolution became popular globally. Both national and local governments across the world attempted to study and follow the trendy idea. In this context, the idea of ‘a smart city’ was introduced as the next generation city model which would be able to lead the fourth industrial revolution. Since the concept of a smart city has emerged by industries, the definition of *smart city* varies dependent on the circumstance of countries and cities. Initially, smart city was interpreted as the ultimate aim (model) of a future city. Professionals who followed such an argument regarded a city as an independent urban area with a clear boundary which has achieved a certain level of sustainability or modernity. However, in the current era, the meaning of a city has become vague and professionals tend to examine a city based on services provided by

the city. Thus, more recently, the idea of a smart city is considered as a platform or means to achieve an ideal city model.

	U-City 1.0	U-City 2.0	Smart City
Period	2009 - 2013	2014 - 2018	2019 - 2023
Aim	Creating a new growth machine based on ICT and IoT	Efficient urban system	Resolving urban problems Creating an innovative eco-system
Data openness	Closed	Partly Closed / Opened	Opened Partly closed
Platform	Closed	Partly Closed / Opened	Opened (expanded)
Service type	Supplier-led service	Supplier-led service Consumer-led service	Consumer-led service AI service
Institution	1 st U-City Master Plan	2 nd U-City Master Plan	3 rd Smart City Master Plan
Act	Act on the Construction of Ubiquitous Cities	Act on the Construction of Ubiquitous Cities	Act on the Promotion of Smart City Development and Industry
Candidate area	New cities	New cities and Limited current cities	New cities and Expanded current cities
Main actors	Ministry of Land, Infrastructure and Transport	Diverse ministries and local governments	Presidential Committee on the Fourth Industrial Revolution
Citizen participation	No participation	Participation	Participation
Project types	Infrastructure construction	Building a public integrated platform	Creating national pilot smart cities

Table 7-2 The development paradigm from the concept of U-City to Smart City (source: Ministry of Land, Infrastructure, and Transport; revised by author)

In the South Korean context, a smart city is usually defined as a city (particularly urban infrastructures) which provides citizens with effective and efficient urban services by using IoT and ICT technology (Telecommunications Technology Association, 2018). Officially, the term U-City has been substituted for smart city since 2017 because there were no big differences between two ideas except for two major points (Table 7-2). Foremost, the concept of U-City is a government-led urban regeneration idea whilst the smart city project would be implemented and managed by a multiple level of actors. Citizens and private firms were excluded in the delivery of the U-City project. It was a typical top-down based and government-led project. The government mainly concentrated on the construction of

urban infrastructure regarding IoT and ICT. In this context, sharing data was mostly prohibited. On the other hand, in the concept of a smart city, it is an interactive city so that citizens' participation is an essential factor in the implementation of the project. Based on cutting-edge technology particularly regarding IoT and AI, a smart city not only attempts to resolve traditional urban problems but also to prevent unexpected future issues. Furthermore, the South Korean government realised that the construction-led U-City project had not been quite as productive as the national government expected. In contrast, in a smart city, it ensures that the central government concentrates on the management and operation of the developed high-tech city by creating an industrial cluster regarding the fourth industrial revolution in addition to expanding the infrastructure construction.

Based on the above achievements and lessons from the U-City projects, the 'Smart City Promotion Strategy' for urban innovation and future growth engine was announced in 2018. Then in 2019, the 3rd Smart City Master Plan (2019 – 2023), which is revised from the 2nd U-City Master Plan, was published (Lee, 2018). Under the 3rd Smart city Master Plan, the South Korean government strengthened 'human-centric, sustainability, citizen participation, and data openness' within smart city projects (Ministry of Land Infrastructure and Transport, 2019). In particular, the national government sought to build a citizen participation framework through diverse online initiatives. It also promoted the participation of private enterprises by creating an entrepreneurial eco-system with deregulation regarding land-use planning and industries. The central government endeavoured to expand its support for a smart city which included suggestions of tailored support for private firms, strengthening international cooperation and developing an efficient and effective city management system.

Eco-delta City

In this background, the South Korean government designated two areas to develop as a national pilot smart city project. Eco-delta City, which will be discussed in this chapter, is one of the two national pilot smart city projects. Eco-delta City is located in Gangseo-gu, on the west side of Busan Metropolitan City (Figure 7-3). Gangseo-gu is one of the underdeveloped areas in Busan. It had not been developed properly until 2010 because building height restriction for Gimhae International Airport and green belt strictly obstructed the urban development process. After the delivery of maintenance policies and programmes for adjacent areas along the Nakdong River⁶³, the Ministry of Land, Infrastructure, and Transport finally approved the development of the protected area.



Figure 7-3 Location of the Eco-delta City project (recourse: K-water; revised by author)

In 2010, the urban regeneration project was planned and named as 'Eco-delta City'. At this time, there was little investment because only the Busan Metropolitan City government was interested in the regeneration project. Since the project required a great amount of funds, the city government could not afford to implement the project by itself. However, two years later, based on the Special Act on the Utilization of Waterfronts, Eco-delta City was designated as a Waterfront Area for the International Logistics Industry City (Shin,

⁶³ The Nakdong River is the longest river in South Korea (length: 510 km) and passes through major cities such as Busan and Daegu.

2012). This meant that the Eco-delta City project would be supervised by the central government (with an additional national budget) as well as the local government. Due to such a policy change, Busan Metropolitan City government was able to make an agreement with Busan Metropolitan Corporation⁶⁴ and K-water⁶⁵, who took on roles as main developers, about the development of Eco-delta City. Site construction started in 2016 and Eco-delta City was designated as a ‘national pilot smart city project’ in 2018 which accelerated the delivery of the project. The scale of the original Eco-delta City project is much wider and bigger than that of the designated area set by the central government (Table 7-3). However, this chapter will only concentrate on the designated area since the designated area is publicly introduced as the Eco-delta City project and developers are also specially concentrated on the designated area for now.

Eco-delta City		Eco-delta City: National Pilot Project	
Location	Gangseo-gu, Busan, South Korea		
Area	11.8 km ²	Area	2.8 km ²
Period	2012 ~ 2023		
Expected Population	76,000 (30,000 household)	Population (aim)	8,500 (3,380 household)
Land use	Housing, Commercial, Research and Development, Logistics	Facilities	Multi-functioning area including major city features such as housing, commercial and Research and Development ideal for application of cutting-edge technologies
Developers	K-water, Busan Metropolitan Corporation (Busan Metropolitan City)		
Public / Private	Public development		
Development method	Land sale after the construction of land and infrastructure		
Budget	5.44 trillion Korean Won		
Fund raising	Local government bond, Public corporation bond, Land sale (before land construction), investment by Busan Metropolitan Corporation (20% of total budget)		
Profit usage	Offsetting the dept of K-water		

Table 7-3 Summary of Eco-delta City development (source: Busan Metropolitan City; revised by author)

Urban planners, civil servants and relevant professionals decided to develop Eco-delta City based on a lot of potentials the city area possessed. They believed that the urban regeneration project (under

⁶⁴ Busan Metropolitan Corporation is the local government agency for supplying housing and land and developing an urban area within Busan Metropolitan City.

⁶⁵ K-water (also called the Korea Water Resources Corporation), is the national government agency for comprehensive water resource development and providing both public and industrial water in South Korea.

the name of national balanced development⁶⁶) would become the next generation of city models. In terms of geographical characteristics, the Eco-delta City is located in a waterfront area along the Nakdong River. This condition led the main developer (K-water) to develop a high-tech water management system within the regeneration project. K-water aimed to build a system which provides citizens with useful information regarding water resources surrounding Eco-delta City. Also, one strength of Eco-delta City is that it has good accessibility with diverse methods of transportation: Gimhae International Airport, the Busan Port, and the Busan Railway Station (Figure 7-4). Such good accessibility would be a contributing factor towards creating an industrial cluster successfully. For instance, knowledge workers who are engaged in relevant industrial clusters within Eco-delta City can commute to the city area easily. Since the area is close to the city airport, business owners and investors can also access the industrial cluster efficiently.



Figure 7-4 Accessibility from Eco-delta City (source: K-water)

Regarding the industrial perspective, Eco-delta City is surrounded by traditional industrial clusters within Busan Metropolitan City (Figure 7-

⁶⁶ Since Eco-delta City is located in a rural area of Busan Metropolitan City, the local government persuaded the central government, to justify the huge investment on the project, that Eco-delta City has to have to be implemented as a part of national balanced development.

5). Such circumstances would create a synergy effect by accelerating cooperation between private firms and young knowledge workers in the field of IoT, ICT and computer science to settle in Eco-delta City. In particular, urban planners expected that the agglomeration of diverse industries could prevent the pattern of the ever-decreasing population by gathering various types of labour from outside of the Busan Metropolitan City (Ministry of Land Infrastructure and Transport, 2018a).

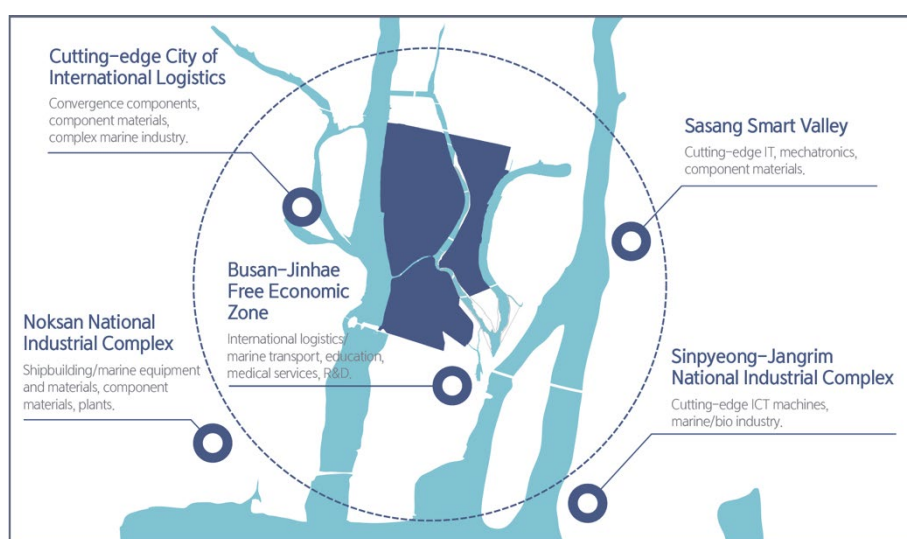


Figure 7-5 Relevant industries surrounding (source: K-water)

Building construction actually started in 2019 aiming to create 2.2 km² of smart city for 3,380 households with 8,500 residents as a national pilot smart city project. The total budget for the Eco-delta City project is 5.44 trillion Korean Won – 11.77 km² of the original Eco-delta City project, as mentioned above in Table 7-3). The budget was planned to be covered by the national government's financial support, main developers' (K-water and Busan Metropolitan Corporation) budget and private investments based on main developers' land sale. Regarding the main developers' budget (the budget was split 80 (K-water) to 20 (Busan Metropolitan Corporation)) it was meant to be used to construct sites and buildings, urban infrastructure and creating industries. Meanwhile, K-water has endeavoured to make a

certain level of profit to redeem its debt. It would be around 580 billion Korean Won based on K-water's expectation. This is an additional motivation for K-water to create a successful smart city model.

Under the Myung-bak Lee⁶⁷ administration, (particularly in 2012), K-water had accrued debts of over 8 trillion Korean Won. So, K-water decided to join the Eco-delta City project as a main developer even though the firm didn't have relevant development experience (Interview with former external master planner, 2019). [code: local context – political issue]

Ironically, however, K-water's participation attracted central government's support for Eco-delta City as it was designated as a Waterfront Area for the International Logistics Industry City (Shin, 2012). This circumstance contributed to the implementation of Eco-delta City without a severe financial crisis.

K-water spent a lot of the budget to ease the central government's financial burden regarding the delivery of previous national projects. If this project cannot be delivered well, the financial status of K-water would be headed for a worsening deficit. To prevent this, the central government should support the Eco-delta City project (anonymous, 2012; cited in Shin, 2012). [code: local context – political issue]

Based on such support, construction work for site and urban infrastructure started in 2019. Regarding diverse programmes within the smart city, they were planned to be paid and managed by Busan Metropolitan Corporation and private investment. The main developers (K-water and Busan Metropolitan Corporation) aimed to finalise the construction of the first residential area within Eco-delta

⁶⁷ Lee Myung-bak is the former President of South Korea from 2008 to 2013.

City by 2021. However, the detailed strategic plans about specific programmes to create a smart city, under the goal of 'preparation for the future' and 'improving citizen participation during the delivery of the project', have not yet been determined. Through the policy making process with policy mobility, such programmes would be revised and modified by central and local governments and main developers.

The concept of a smart city has impacted on the process of knowledge and policy circulation by itself. In the current era, urban planners and civil servants in South Korea tend to believe that a smart city is a type of platform and every service/initiative/programme could be adapted on the platform or replaced from the platform. This allows main developers of a smart city (civil servants and master planners) to seek to adopt knowledge and policy, which was successfully implemented across the world, and adapt to the Eco-delta City instrumentally (Rose, 1991; Rose, 2004). Some significant issues within policy mobility will be described in the following sections.

Global level approach for knowledge and policy circulation

- Collecting and adapting ideas from disseminated global trends regarding smart city

As the first thread of multi-level approaches for knowledge and policy circulation, global level approaches will be discussed. The Presidential Committee on the Fourth Industrial Revolution (PCFIR) on behalf of the South Korean government (this will be explored in the section below, inter-national level) hired the internal master planner from K-water and external master planner who engaged in diverse smart city projects across the world. Based on the master planners' knowledge and experience, the disseminated global trendy idea, policies and programmes were introduced to the project. Such circulated ideas and programmes were adapted and commented in

the Eco-delta City brochure published by the Ministry of Land Infrastructure and Transport (Ministry of Land Infrastructure and Transport, 2018a). As Eco-delta City is currently under construction, it is unsure whether such ideas, policies and programmes will be adapted in practice. However, it could be measured as a good starting point of policy mobility.

In the Eco-delta City project, two national smart city master planners completely managed the master plan of this project on behalf of K-water and the central government, as main developers. The internal master planner is engaged in K-water whilst the external master planner was hired by the PCFIR, South Korean government. The external master planner, in particular, worked actively through the delivery of the smart city project. Since the internal master planner is an employee of K-water (which is a main investor as well as developer), he focused on creating urban infrastructures, including relevant technologies and policies. On the other hand, the external master planner usually concentrated on the ultimate aim and concept of the project by introducing the Eco-delta City project to citizens, private firms and public organisations. He encouraged citizens to participate in the policy making process via online and persuaded private firms and public organisations to invest in the project. The PCFIR hired the external master planner because he has a lot of experience and knowledge regarding a smart city. He runs a business incubator firm in London as a British accelerator by supporting Fintech and smart city tech companies. He has many years of experience of training start-ups regarding Fintech within smart city sectors particularly in Singapore, Hong Kong and London. Based on such a profile, the South Korean government expected that he could suggest the next generation city model which can limit risks that usually occur during implementation of urban regeneration projects. He actually attempted to import some initiatives (programmes and policies) for citizen participations and private firms (start-ups) within smart city industries.

As a master planner, I would like to avoid a conventional approach which only focuses on property-led development which was the very same methodology used in Centum City. We should not follow such traditional approaches anymore. In my perspective, Eco-delta City had opportunities. The Eco-delta City project could attract citizens from Busan Metropolitan City, which maintains a slightly decreasing, yet stable population as the second largest city in South Korea. Also, the previous urban centre, which has a unique urban context with history, architecture, and people, is close to the project area. Such an abundant context could impact on the smart city project. Thus, to make the project successful, I suggested several initiatives such as Smart City 1st Avenue and Living Labs which worked well in other countries (Interview with former external master planner, 2018). [code: circulation of idea – programmes and key actors / local context – political issue]

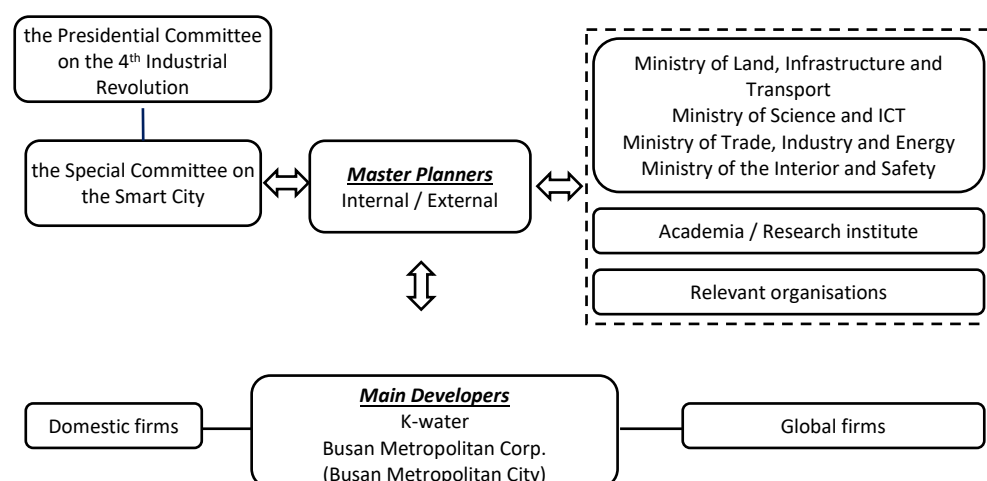


Figure 7-6 the organogram of the Eco-delta City project (source: author)

The organogram of the Eco-delta City project (Figure 7-6) describes the unique position that the master planners held over the smart city project. Seeking to achieve the aims and objectives set by the Special Committee on the Smart City under the PCFIR, the master planners supervise whole practices within a smart city. Moreover, they attempt to reach a compromise between ideal suggestions and practical suggestions. Master planners share such ideas through a number of consultations among several branches of national governments (for regulations and restrictions), academia and research institutes (for the cutting-edge technology and theories).

Furthermore, master planners play a role as facilitators who can support main developers' delivery of the Eco-delta City project. Main developers concentrate on making contracts with private firms in order to construct the new urban space physically, particularly concerning the establishment of the next generation industrial cluster based on specific technologies. The developers build a relationship with not only domestic firms but also with global firms through the master planner's suggestion. In this context, a few global trendy ideas were simply circulated throughout the implementation of the project. Such programmes and ideas which developers attempted to mobilise will be described in the following section.

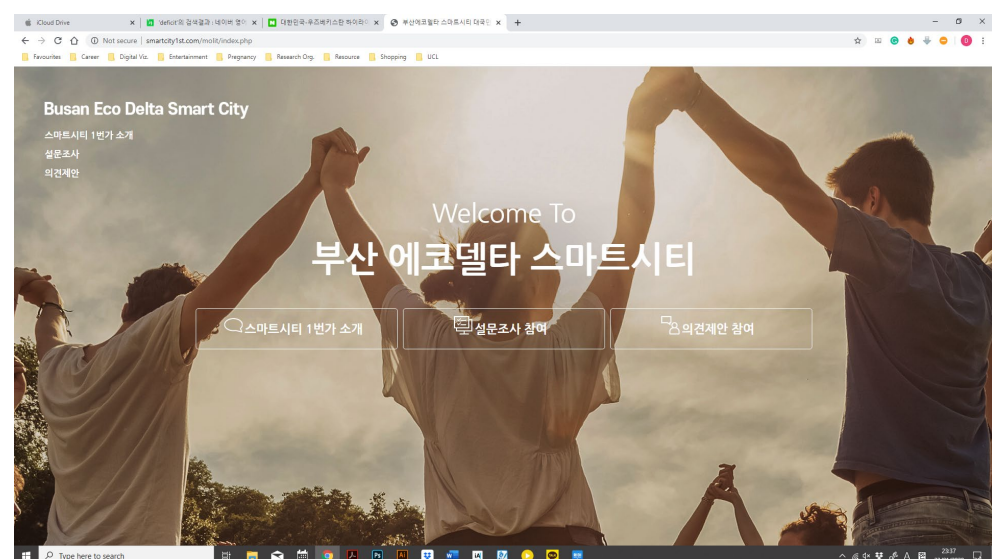


Figure 7-7 Smart City 1st Avenue for Busan Eco-delta City (source: author)

Foremost, to encourage citizens' participation in the smart city project, main developers created and ran both online (Smart City 1st Avenue⁶⁸, Figure 7-7) and offline (a temporary booth on the street) platforms that can be used by citizens without any restriction. Since the idea of a smart city is inclusive of a sustainable society, the platform could contribute to achieving sustainability within the project with regard to the social perspective. Through the online platform, citizens in particular can suggest programmes, initiatives and express their ideas, opinions and even hopes.

Citizen participation is what enables smart city to be a powerful idea. As citizens participate in decision-making processes regarding urban issues, the society ultimately become more sustainable (Interview with academia in the field of smart city, 2018). [code: local context – community issue]

Researchers also suggest research data and their suggestions for the future city model. Both offline and online platforms were expected to become a citizens' master plan of Eco-delta City. Unfortunately, however, it did not work well at all.

It seems quite simple but civil servants were not accustomed with such system (online platform). I hoped that it would become an active online forum. But it was just created and then abandoned (Interview with former external master planner, 2018). [code: circulation of idea – programmes and key actors / local context – political issue]

It was very important to update and maintain the website in the long-term until the completion of Eco-delta City. Hence, it required a certain level of effort to advertise the platform to citizens and enough

⁶⁸ <http://www.smartcity1st.com/index.php>

time was needed to collect citizens' opinions through such a platform. However, developers could not afford to spend sufficient effort and time on the platform because they were keen on achieving prompt outcomes from their investment. They preferred to implement a top-down based project due to its efficiency. It was impossible and unreasonable for staff to manage the platform as was suggested and partly some staff believed that it was an ostentatious programme. On the other hand, in London, such initiative works effectively and productively since developers understood the importance of citizen participation on a smart city and embedded such activities in the action plan in advance when they created the master plan (Chun, 2018). It is a totally different circumstance in Busan and thereby there were only a few official images and documents with no citizen participation on the Eco-delta City website.

Another initiative, the global 'living lab hub' (Figure 7-8), was also introduced into the Eco-delta City project. The global living lab hub is an innovation portal which shares diverse organisations' ideas, knowledge, experiences and recreates outcomes from the collected data. Based on case studies in North America and Europe, K-water and Busan Metropolitan Corporation concentrated on the European Network of Living Labs⁶⁹ (ENoLL). Regarding ENoLL, it was founded in 2006 under the auspices of the Finnish European Presidency. It has grown into a huge-size group, which consists of more than 150 active living lab members. This was possible because the Finnish government promoted other European governments to encourage many organisations within individual countries to join the living lab project (consequently 20 countries of 28 European Union Member States participated in the project). European Union members agreed to share useful data and best practices, learning, and supporting each other, and working jointly for international development projects. This works in collaboration with universities, companies,

⁶⁹ The European Network of Living Labs (ENoLL) is the international federation of benchmarked Living Labs in Europe and worldwide. ENoLL provides co-creation, user engagement, test and experimentation facilities targeting innovation in many different domains such as energy, media, mobility, healthcare, agri-food, etc.

local government, local communities and citizens, promoting a bottom-up innovation process in real life contexts (European Network of Living Labs, 2006).



Figure 7-8 The concept of living lab hub in Busan Metropolitan City (source: K-water)

As an innovative sharing platform, ENoLL fascinated the main developers of Eco-delta City. The developers endeavoured to establish such a type of living lab hub, the global ‘living lab hub’, aiming to exchange the best examples or practices of living lab projects among global smart cities. They imagined that the Korean style living lab hub would contribute to encouraging active participation of many organisations (in addition to citizens through Smart City 1st Avenue) in the policy making process of the smart city project. Developers planned to construct the living lab hub (particularly concerning IoT) in cooperation with private corporations in the field of medical, transportation, energy, logistics, senior well-being and film (Ministry of Land Infrastructure and Transport, 2018a).

Furthermore, the Busan Centre for Creative Economy and Innovation (BCCEI), which is operated by both the national and local government budget, created Busan Network of Living Labs in 2017 and promoted Busan citizens to experience the concept of living labs constantly. In 2018, Busan Network of Living Labs joined ‘Open Living Lab Days 2018’ in Switzerland (an annual event for sharing best examples of living labs across the world with in-depth discussion organised by ENoLL) to build a close relationship with ENoLL (Cho,

2018). Moreover, the BCCEI organised 'Smart City Forum in Busan 2019' and invited the president of ENoLL. Through the forum, BCCEI encouraged citizens to learn about the objective of Busan Network of Living Labs by emphasising its importance: 'what Busan Network of Living Labs is'; 'how to use the platform'; and 'why Busan Network of Living Labs is necessary'. The organisation hoped many citizens would join Busan Network of Living Labs and achieve productive outcomes from it for the Eco-delta City project (Lee, 2019).

The internal master planner on behalf of K-water paid attention to global cities located in waterfront areas such as London, Paris, and New York. The master planner (Yang, 2006) believed that such cities improved their attraction points and developed their city brand by utilizing the abundant waterfront context. In other words, by establishing a waterfront area alongside the river, city governments created unique social and cultural urban identities and simultaneously increased their economic added values. The development of waterfront areas also contributed to the improvement of citizens' quality of life. Since K-water is the governmental agency which supervises comprehensive water resource development, the master planner particularly sought to develop Eco-delta City through abundant water resources surrounded by the Eco-delta City areas.

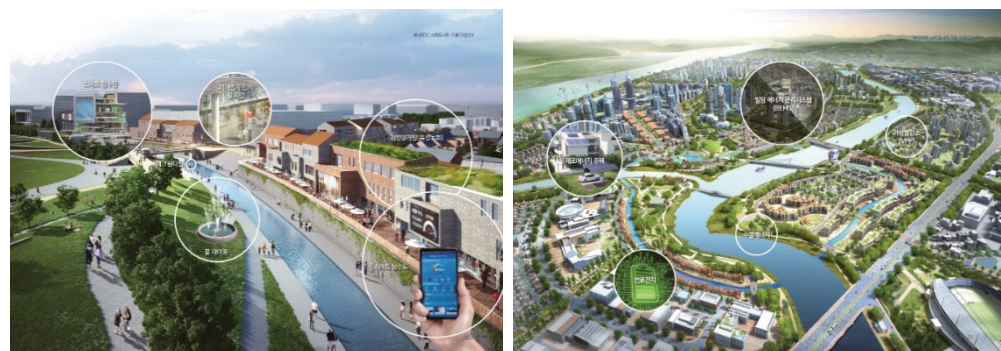


Figure 7-9 Virtual image of smart water/energy management system (source: k-water)

This circumstance led him to suggest a water resource management system, so-called smart water management (Figure 7-9). The system consists of approximately a thousand different technologies including

remote control and ICT. The system usually aims to prevent disasters regarding water issues, to improve water filtering mechanism within a community area as well as in individual buildings and to reduce environmental liability through the Low Impact Development⁷⁰ strategy. Furthermore, the smart water management system is directly connected to energy issues. Renewable energy by using water resources will supply energy in the Eco-delta City and enhance the performance of zero-energy buildings and Building Energy Management System which will be established in the local community. The master planner tended to collect the latest global technologies regarding water management and adapt them to the Eco-delta City project. Although it is unsure to what extent such technologies would materialise in reality, the experience of K-water (exporting such trendy technologies globally to over 55 countries since 1994) would help to improve the success of the project. If such initiatives are actually achieved through the Eco-delta City project, it could significantly improve citizens' quality of life (Ministry of Land Infrastructure and Transport, 2018a).

Eco-delta City will be famous for its globally leading water resource management system. We are preparing at least 10 high technologies which could be used within the city. I hope such technologies and ideas will be exported to other countries after the successful implementation of this project (Interview with former internal master planner, 2018). [code: circulation of idea – technologies and institutions / local context – environmental issue]

One of the last global programmes and ideas which main developers attempted to adapt in Eco-delta City is the Key Performance Indicators (KPIs) for smart cities. Not only the main developers (K-water and Busan Metropolitan Corporation) but also the South

⁷⁰ A low impact development (LID) is the use of water management practices to reduce the impact of development on water related problems (Shafique & Kim, 2015)

Korean government focused on global standardisation of the smart city model. There were no global guidelines or ultimate indicators that could assess the level of a smart city even though some organisations developed their individual KPIs. So, civil servants in the South Korean government sought to create standards for assessment regarding a smart city. They also hoped that such a Korean standard for smart cities developed would later become a global standard in the long term. They believed that if the Korean standard for smart city is able to achieve a global reputation, the Korean smart city model (Eco-delta City) could be exported globally.

Based on this context, master planners paid attention to KPIs for smart cities from European Nations (EU) and the International Telecommunication Union (ITU). Both organisations already developed and suggested KPIs as a measurement of the city's progress towards their smart city goals. Furthermore, through the KPIs, they set up a group of objectives to achieve a certain level of urban sustainability. For instance, regarding ITU, the indicators enable the city government to measure the performance of the smart city project over time, comparing the outcomes of the project to those of similar projects within other cities. The Key Performance Indicators are further sub-divided into core and advanced indicators. Core indicators provide a basic outline of measurement: smartness of cities, sustainability within city, and performance of smart city. On the other hand, advanced indicators provide a more in-depth perspective of a smart city such as the progress of detailed initiatives (International Telecommunication Union Academy, 2016).

As a result of above process, similar to ITU, main developers first set a vision of Eco-delta City as a 'global innovative growing future city in combination with human, nature, and technology'. Based on the vision, three aims were created: a city where work and rest coexist; a city where human and nature coexist and an innovative city which contributes to the achievement of sustainable development. To achieve such objectives, the developers created six core indicators

with 27 advanced indicators: smart health which has eight advanced indicators for preventing social and natural disasters; smart life which consists of five advanced indicators for the improvement of the quality of life by minimizing working hours; smart energy which has two advanced indicators for supplying additional energy by using renewable energy and minimizing energy consumption regarding transportation and construction; smart water (resource) with five advanced indicators for recycling water and waste; smart time management which consists of six advanced indicators for saving citizens' time through consumable urban life; and smart employment for securing economic sustainability of urban area by preparing the next generation of industry. In 2017, the Act on the Promotion of Smart City Development and Industry was partly revised, and it provided significant support for KPIs for a smart city (Park, 2019). Under the revised Act, the national pilot smart city had to set up KPIs (Figure 7-10) as well as aims of business, and to announce its performance level to improve the efficiency and effectiveness of the smart city project.

Eco-delta City will be the first smart city which uses a city performance evaluation and certification tool in Asia. In particular, three main areas – planning (innovation in process), construction (innovation in technology) and management (innovation in public participation) – will be critically examined within the development of Asian KPIs (Interview with former internal master planner, 2018). [code: circulation of idea – institutions]

In addition to creating KPIs for Eco-delta City, the South Korean government still focused on global standards for smart cities. The Korean Agency for Technology and Standards has constantly expressed an interest in sharing ideas and policies regarding global standards for a smart city across the world by organising 'Smart City Asia Standards Forum'. Through such a global forum and

consultations, the idea of global standards, which was imported as a form of global trend, has become one of the hottest agendas within a smart city in South Korea after localisation. This underlies the commercialisation of a Korean smart city model which will be explored in the next international approach section.

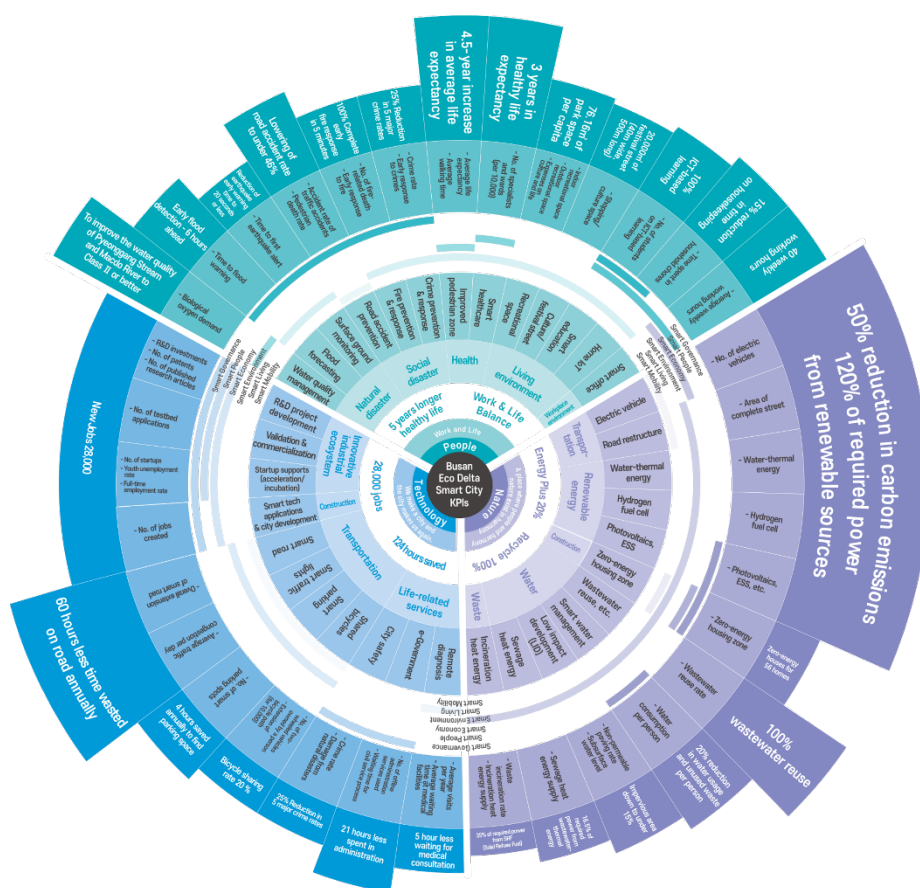


Figure 7-10 KPIs for Eco-delta City (source: K-water)

In the Eco-delta City project, the internal master attempted to share and export a water resource managing city model to another context as an outcoming policy consultant (McCann, 2011). So, he usually concentrated on the development of the water management system and framework within the idea of a smart city. The external master planner played a role as an incoming policy consultant (McCann, 2011) whilst civil servants played the same role as in the previous two urban regeneration projects. The external master planner had real power (Werner and Strambach, 2018) to actively contribute to

knowledge and policy mobilisation. As an incoming policy consultant, he introduced different smart city policies and programmes from other contexts. Through the effort of master planners, diverse types of representations (Temenos and McCann, 2013) and global imaginaries (Peck and Theodore, 2010) such as KPIs, Smart City 1st Avenue, and living lab hub, which became symbols for the concept of smart city in Busan, were partly mobilised.

International level approach for knowledge and policy circulation

- Importing and exporting ideas based on international relationships

In addition to the global level approach, the international level approach, as the second thread of multi-level approaches for knowledge and policy circulation, also played a certain role through the implementation of Eco-delta City. The international approach in this section means that various types of actors in the Presidential Committee on the Fourth Industrial Revolution (PCFIR) accelerated policy mobility through a contract (or agreement) with specific governments or firms in other countries and cities. Various types of actors imported best practices and examples to the Korean smart city model and exported the Korean version of technologies adapted in Eco-delta City through international relationships.

The international level approach is usually led by the PCFIR, which consists of diverse government agencies (ministries) on behalf of the South Korean government. The PCFIR was founded based on the Presidential Decree on the Creation and Management of the PCFIR promulgated in 2017 (Lim, 2019). The organisation basically has four roles: creating national master plans and strategies regarding the fourth industrial revolution; deliberating upon and coordinating policies suggested by various ministries and the committee members; supporting the advancement of science and technology

and the development and innovation of core technologies (AI, ICT, etc.) for the fourth industrial revolution; and fostering new industries and services created through the integration of intelligent technologies within existing industries (The Presidential Committee on the 4th industrial revolution, 2017). In the current era, the committee particularly encourages citizens to participate in the policy making process of a smart city by organising public campaigns.

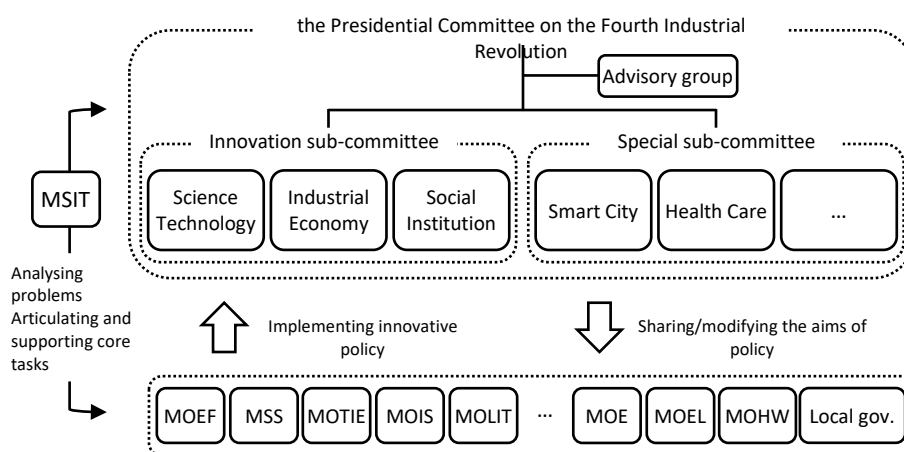


Figure 7-11 the organogram of the PCFIR⁷¹ (Source: PCFIR; revised by author)

The PCFIR consists of mainly three groups (Figure 7-11): advisory group, innovation sub-committee and special sub-committee. The innovation sub-committee endeavours to secure technologies which would be the growth engines of South Korea in the future, to create industrial infrastructures and an ecosystem for the future economy, and to prepare for social changes in the future. The special sub-committee particularly focuses on the agendas regarding a smart city (Acts, standardisation, and international cooperation, etc.) and health care. The advisory group includes civil servants from diverse governmental agencies under more than nine ministries. It helps the committee to cooperate with various ministries and local

⁷¹ MSIT: Ministry of Science and ICT / MOEF: Ministry of Economy and Finance / MSS: Ministry of SMEs and Start-ups / MOTIE: Ministry of Trade, Industry and Energy / MOIS: Ministry of the Interior and Safety / MOLIT: Ministry of Land, Infrastructure and Transport / MOE: Ministry of Education / MOEL: Ministry of Employment and Labour / MOHW: Ministry of Health and Welfare / Local gov.: Local government

governments and improves the performance of the committee throughout the policy making process.

The PCFIR particularly led to build a relationship with international partners during the implementation of the Eco-delta City project, which is an essential prerequisite for the successful mobilisation of knowledge and policy. Based on the PCFIR's effort to create a global standard regarding a smart city, both the central and local government intended to commercialise Eco-delta City as a Korean smart city model and to export the model to other countries and cities. In the ground-breaking ceremony of Eco-delta City in 2019, President Jae-in Moon said in a speech that

When the first smart city in South Korea – Eco-delta City – is completed in Busan, citizens will be able to experience significant changes in life first-hand. Also, Busan Metropolitan City will become the future city of Korea and the central government will also invest in making Busan a world leading smart city model (Busan Metropolitan City, 2019). [code: local context – political issue]

Keo-don Oh, the mayor of Busan Metropolitan City added

Eco-delta City shows in advance what the future city will look like, coping with the 4th industrial revolution. And this will be a good opportunity for the city of Busan to lead the world development of smart cities and will also be a new developmental motivation to create employment opportunities (Busan Metropolitan City, 2019). [code: local context – political and economic issue]

The support from the president of South Korea and the mayor of Busan Metropolitan City encouraged PCFIR and main developers of Eco-delta City to establish international partnerships. There have been numerous sharing activities through diverse partnerships:

cooperation between national governments; agreement between national government and international organisations; and contract between private firms (or research institutes) and national government. Regarding the cooperation between national governments, the South Korean government depends on ASEAN⁷² Smart City Network (ASCN⁷³). The national government executed the Memorandum of Understandings (MOUs) for the cooperation regarding the development of smart city with Indonesia in 2016 and Peru in 2018 respectively. Based on the MOUs, the PCFIR shares the latest technology and certified resolutions for urban problems that could be adapted in a smart city by participating in the worldwide smart city network (The Presidential Committee on the 4th industrial revolution, 2018).

The Ministry of Land, Infrastructure and Transport (under the cooperation with PCFIR) also supported the export of the Korean smart city and the import of smart city technologies by joining 'ASEAN Smart Cities Showcase in 2018'. The event was held as part of the East Asia Summit⁷⁴ and aimed to make new inter-national relationships which could promote an official sharing process about individual country's policies and technologies regarding a smart city. The ministry introduced Eco-delta City with the government's institutional support (the first Act regarding a smart city across the world), diverse deregulations for a smart city, and detailed technologies in terms of water resource management, which was rendered through Augmented Reality technology. As a result, the South Korean and Malaysian government signed a Letter of Intent to share technology-led smart city initiatives and policies between Eco-delta City, Busan and Kota Kinabalu, Malaysia. In particular, the

⁷² The Association of Southeast Asian Nations

⁷³ The ASCN is a collaborative platform where cities from the ten ASEAN Member States (AMS) work towards the common goal of smart and sustainable urban development ASEAN. 2018. *ASEAN Smart Cities Network* [Online]. Available: <https://asean.org/asean/asean-smart-cities-network/> [Accessed 2020].

⁷⁴ The East Asia Summit is a regional forum held annually by leaders of 18 countries – ten ASEAN Member States, South Korea, China, Japan, Australia, New Zealand, India, Russia, and the United States.

PCFIR planned to join the process of delivery of the Kota Kinabalu master plan. There were additional international relationships within ASEAN countries such as Thailand (transportation system), Vietnam (transportation system), Laos (water management) and Singapore (Digital Twin) (Ministry of Land Infrastructure and Transport, 2018b). Regarding 'Digital Twin'⁷⁵ in Singapore, PCFIR and main developers in Eco-delta City were keen to render a similar form of 'Digital Twin' under the name of 'Smart Digital City' as a potential resolution for future urban problems. Ultimately, PCFIR endeavoured to export a platform (system) of Eco-delta City as the first Korean smart city model based on this international relationship and expected that the export would contribute to economic and industrial revitalisation in the local area.

To support application of scientific methods in the policy decision making process, the core technology of Digital Twin will be funded (18.5 billion Korean won) and developed between 2018 and 2022. Moreover, the transferability of technology will also be tested (Jung and Sung, 2018). [code: circulation of idea – programmes / local context – community and environmental issue]

Agreement between the national (or local) government and international organisations was perceived as an opportunity which can help private firms that have joined the Eco-delta City project to export their technologies across the world. The firms sought to test whether their smart city technologies work well or not. This is strongly related to a practical approach for exporting such interventions to other countries (and commercialisation) and creating a relevant industry within the city. Consequently, PCFIR has tried to support the developers of Eco-delta City and private firms to conduct a pilot study to test transferability to a different context in developing countries.

⁷⁵ Digital Twin is a 3D rendering of an urban area into a virtual simulation environment. This allows citizens and professionals to experience the urban area from early stages of planning and reduces any risks which can occur in the delivery of development.

For instance, the World Bank and PCFIR have established and operated a 'Smart City Solution Portal' which shares the information of private firms which have excellent smart city technologies and provides the firms with opportunities to have a consulting position for two years (2018 – 2019). Moreover, the cooperation between UN-Habitat and PCFIR supported the development of smart city masterplans in Iran, Nigeria, and Myanmar by establishing the Korean private corporation's smart city portal (Ministry of Science and ICT, 2018). In particular, PCFIR has endeavoured to build a partnership with European Innovation Partnership for Smart Cities and Communities, FIWARE⁷⁶, Global Standards Collaboration, Norway, Denmark, Netherland, and Australia.

The partnership (for creating the smart city industry) is all about our future. When we investigate current urban problems in Busan, even South Korea, we have to prepare for the next generation of industry urgently. To achieve this, the national government (PCFIR) considered ways to acquire institutional support and political support seriously. The partnership provides the government with a good opportunity to conduct a pilot study. I strongly believe that such a partnership works as a great resource (or insurance) in the future (Interview with former external master planner, 2019). [code: circulation of idea – key actors and their relationships / local context – political issue]

The international partnership between national governments and private firms (or research institutes) hugely contributes to sharing technologies, policies, and state-of-art agendas regarding a smart city. For instance, PCFIR organised a couple of events such as the Korean-ASEAN Smart City Fair, the Smart City International

⁷⁶ FIWARE is a framework of open source platform components to accelerate the development of smart applications.

Conference, and World Smart City Week to provide private firms with a chance to meet their prospective clients which are usually national governments. In these events, private firms made contracts with individual countries. A small and medium-sized enterprise signed contracts with the Chinese and Indonesian governments to conduct a pilot business regarding IoT-based applications used in a smart city whilst a large-sized corporation contracted out the supply of a smart card system for transportation in Colombia and Greece (Ministry of Science and ICT, 2018). Such type of contracts extends international relationships which are useful for exchanging experience and knowledge of national governments and preparing the next step for creating a successful smart city. In terms of the international relationships created for academia by the 'Global Joint Programme' of World Smart City Week in 2018, a national research institute of South Korea (the Korea Research Institute for Human Settlements) signed a Memorandum of Understanding (MoU) to share localised smart city policies with 16 foreign local research institutes in Barcelona, Copenhagen, Helsinki, and Porto. In this programme, the new external master planner⁷⁷ introduced the progress of Eco-delta City so far and suggested an idea of a pilot study to test transferability whilst other countries focused on their priorities such as KPIs for the smart city of Helsinki, industrial cluster for the smart city of Barcelona, smart city infrastructures and platform of Porto, and the data living lab of Copenhagen (Ministry of Science and ICT, 2018).

In the international approach to policy mobility, the power is usually dependant on micro spaces (event) and intangible space (specific programme within the event) rather than on actors' reputation (Werner and Strambach, 2018). Sometimes the circuit of knowledge and policy occurred based on international competition, but other times it also happened as other countries made efforts to catch up

⁷⁷ He was officially hired in 2018 in succession to the first external master planner whom this chapter usually termed as the 'external master planner'. This will be explained a bit more in the next section.

with developed countries' latest technologies and interventions as a learning process (Marsh and Sharman, 2009). The most interesting point of this section is that PCFIR, a new type of governance group in South Korea for the smart city project, usually works as an outgoing policy consultant (McCann, 2011) which had not been found so far in the Korean context of urban planning. Various types of event, cooperation and agreement could be interpreted as an informational infrastructure where the transaction of knowledge and policy commonly happen.

Local level approach for knowledge and policy circulation

- Local context which ultimately led to an inappropriate transfer

The local level approach, as the last thread of multi-level approaches for knowledge and policy circulation, refers to the total efforts of the deliverers to localise knowledge and policy by interacting with international ideas and adapting it to the smart city project in practice. Compared to somewhat productive processes and outcomes of both global and international level approaches, the local level approach did not work properly in Eco-delta City, but rather was interrupted. Such interruptions were basically caused by the local context: particularly concerning the different awareness of a smart city among all project deliverers; strict regulations and bureaucratic procedures and the shrinkage of the role of master planner. As a result of interruptions, the implementation of Eco-delta City has been delayed. Furthermore, the Eco-delta City project is actually implemented in a very similar way to the traditional property-led regeneration project, even though it began with a concept of a smart city which was totally different with conventional urban regeneration projects. During the delivery process, the previous two urban regeneration projects also had similar interruptions from the local context. However, the difference is that the interruption of Eco-delta City was based on internal issues whereas those of the two previous urban regenerations were strongly related with external issues (for

instance, an impact of the global economic crisis). Such circumstance led this chapter to ultimately pay attention to the failure of policy mobility. To address the failure of policy mobility in Eco-delta City, this section will mainly explore the local context which impacts on the local level policy mobility. It will describe the way in which it led to incomplete transfer (one of the three types of the failure of policy mobility) of Eco-delta City.

The biggest issue in the local context which interrupted a local level approach for knowledge and policy circulation was that all project deliverers (such as main developers, civil servants in local government and master planners) had a different awareness or perspective of a smart city. In terms of Busan Metropolitan City government, civil servants regarded the idea of a smart city as a developed version of U-City. In 2005, the city of Busan was introduced by the Financial Times (2005; cited in Kim, 2016) as the first city in the world where the U-City masterplan was officially established. In the U-City project, civil servants usually focused on creating Information Technology-led urban infrastructures. For instance, they attempted to adapt location-based services (LBS) in the urban infrastructure such as transportation, logistics, security and energy supply. Using LBS, citizens do not have to spend their time finding an empty space for car parking or for finding their cars' location in a parking lot since the LBS tells the driver the precise location quickly and precisely. Furthermore, people can be evacuated from natural disasters through LBS which tells people the best route to avoid dangers. From the experience through the U-City project, civil servants believed that the idea of a smart city is not different from the concept of U-City. This could be also found in the definition of smart city in the 'Smart City Act'.

'Smart City Act' defines a smart city as a sustainable city which provides a variety of city services through urban infrastructure – constructed with the convergence of ICT and land development

technology – to improve the competitiveness of the city and to achieve a certain level of quality of life (The Presidential Committee on the 4th industrial revolution, 2018). [code: circulation of idea – regulation and Acts / local context – political issue]

There is no big difference between U-City approach and a smart city approach by the central government. It seems like the difference between iPhone by Apple and Galaxy by Samsung (Interview with academia in the field of smart city, 2018). [code: local context – political issue]

Civil servants in Busan Metropolitan City, thus aimed to concentrate on establishing and maintaining the technical perspective of urban infrastructure based on this idea of a smart city.

Honestly, we are not interested in the outcomes of Eco-delta City. Since it will take a long time for urban development, we have to wait and see what will happen. Instead of participating in the development process, there is growing concern about the budget for the maintenance of technical devices in urban infrastructure. For instance, in terms of constructing a road for the smart city (e.g. installing public Wi-Fi devices, LBS devices, etc.), the budget for maintenance is almost four times as much as the budget for the initial installation charge. Although K-water invests their funds in the installation of such urban infrastructure, we are afraid of the way in which we can manage and maintain such relevant devices (infrastructure) (Interview with officer of Smart City Promotion Division of Busan Metropolitan City, 2018). [code: local context – economic issue]

However, the external master planner believed that a smart city is a concept which seeks to prepare the next generation of industry by creating a business-friendly environment in local areas. His comment after his resignation⁷⁸ as the external master planner of Eco-delta City clearly describes what he thought:

There was not a smart city in Busan. There is not a smart city in Busan. Eventually, there will not be a smart city in Busan, even in South Korea as well. They (main developers) were still focusing on property-led development, which was a very general and popular approach for urban regeneration in the 1990s and 2000s. Yet, I am sure that it would not work for now. It's almost the 2020s. In my opinion, without the next generation of industry, the city would disappear, and this will impact on the whole South Korean society simultaneously. They (main developers) had no idea how to invite innovative start-ups and how to create a new generation of industry in Busan. Both the South Korean government and Busan Metropolitan City government should consider this issue urgently (Interview with former external master planner, 2019). [code: circulation of idea – policies and programmes / local context – political issue]

The interesting point is that the South Korean government was able to imagine what he would do before recruiting him. As the Chief Executive Officer of a start-up incubator business in London, United Kingdom, he is a professional architect establishing new industries regarding a smart city by encouraging prospective start-ups. When the national government hired him, civil servants believed that learning from the developed countries' ideas and policies regarding a

⁷⁸ He officially resigned due to personal reasons and a new master planner was hired in 2018. If there is no additional information, the term, 'external master planner' in this chapter, generally means the one who resigned.

smart city would work if they adopted such ideas and policies in the South Korean context. As a result, such a different recognition of a smart city has impacted on the aims of the Eco-delta City project and the detailed objectives within the project. For now, the Eco-delta City project has concentrated on construction work similar to conventional property-led projects rather than on ideas and policies from other contexts as suggested by the external master planner who resigned in 2018.

Secondly, in the South Korean context, strict regulations and complicated bureaucratic procedures (arguably always) interrupt the policy making process. According to the Global Innovation Index 2019 (World Intellectual Property Organization, 2019), South Korea ranks 45 of 127 countries in regulatory environment. This affected the policy mobility within Eco-delta City. For instance, in the master plan of Eco-delta City, the establishment of an industrial cluster focusing on IoT and ICT based industries was planned in order to create an innovative ecosystem. It was expected to create jobs and to increase the population of Busan Metropolitan City by securing knowledge workers to remain in Busan. However, private firms were not interested in moving into the smart city due to strict regulations. Private firms need to conduct relevant experiments and to build relevant facilities to develop innovative technologies and create business models. Hence, the firms requested temporary approval for currently illegal technologies and services under the name of 'smart city tech sandbox'. The introduction of such restrictions, likewise in Singapore and Japan (Chun, 2018), would be required from the initial stages of the Eco-delta City project. Main developers also agreed with this background and claimed that the South Korean government's regulations should be eased (Ministry of Land Infrastructure and Transport, 2018a). However, the Act on the Promotion of Smart City Development and Industry has not yet been revised because of bureaucratic procedures.

In South Korea, there is a strict local rule: first regulation and then trial. This context seriously hampers the development of a new industry. Some conventional traditions should be modified for new industries so that 'trial comes first, and then regulation'. There are few start-ups which would accept such harsh business environment (Interview with former external master planner, 2019). [code: circulation of idea – regulations and Acts / local context – political issue]

Excessive concerns about the security of personal data also interrupted the mobilisation process regarding a smart city in South Korea. Data are the critical resource for the idea of a smart city. Not only civil servants but private firms also need to collect citizens' useful data for their profitability. Some people can argue that such profitability (through the exploitation of personal data) is improper for citizens' human rights whereas others believe that such usage is a part of the developing process for public interests (such as the creation of a smart city). In this context, main developers and master planners suggested the establishment of a 'data market' emulating London Datastore. As a free and open data-sharing portal, the London Datastore has provided citizens and private firms with more than a thousand types of processed data. As a result, the initiative has supported more than 600 mobile applications created by citizens and private firms (Ministry of Land Infrastructure and Transport, 2018a). Through the export of such applications across the world, the United Kingdom has become one of the world leading countries regarding the fourth industrial revolution.

Compared to London's innovative initiative, the South Korean government released raw data through a government website. However, the data on the website were quite useless since they were simply related to national statistics which did not include user information. Without the user information, the public and the firms

would not be remotely interested in the data. The national government released such data because it is excessively concerned about the leakage of personal data. Although personal data is technically managed by the Ministry of the Interior and Safety through a number of restrictions, the issue of releasing personal data is related to many other branches of the Korean government (e.g. The Ministry of Science and ICT, the Ministry of Trade, Industry and Energy, Busan Centre for Creative Economy and Innovation, etc.). Thus, to release personal data, main developers need to be given approval from all governmental agencies regarding the management of personal data through bureaucratic procedures. This significantly hampers the adaptation of initiatives for a smart city introduced by foreign countries.

Sometimes the bureaucratic system is effective in managing complicated work. However, sometimes it is too restrictive to make progress. I know that security of personal information is important but personal data which I would like to use is not considered to be so sensitive, particularly in foreign countries. Hopefully, such restriction would be amended (Interview with an officer of private firm regarding ICT, 2019). [code: circulation of idea – policies and programmes / local context – political issue]

After much meandering, the master plan of a data centre based on IoT and AI technology (which played a role as a manager who supervises both raw and processed data from two national pilot smart city projects) will be suggested by early 2020 with the cooperation of large scale private firms such as Samsung, Hyundai, SK group, Korea Telecom and Kakao (Ahn, 2019).

Lastly, the shrinkage of the role of the master planner starting in 2020 would impact on the circuit of knowledge and policy (Jeon, 2020, Figure 7-12). The most essential point of a smart city is a

bottom-up governance system. Compared to previous urban regeneration projects that were developed and strictly supervised by the government, the national pilot smart city project aims to be implemented through the participation of citizens and private firms. To achieve this, the Presidential Committee on the Fourth Industrial Revolution (PCFIR) hired experts in the private sector. In particular, master planners had the authority to supervise the whole delivery process of a smart city by managing main developers, relevant organisations and private firms. Their ideas, knowledge and experience had a great impact on the implementation of Eco-delta City even though they did not fully have budget authority and power of appointment (appointing external experts).

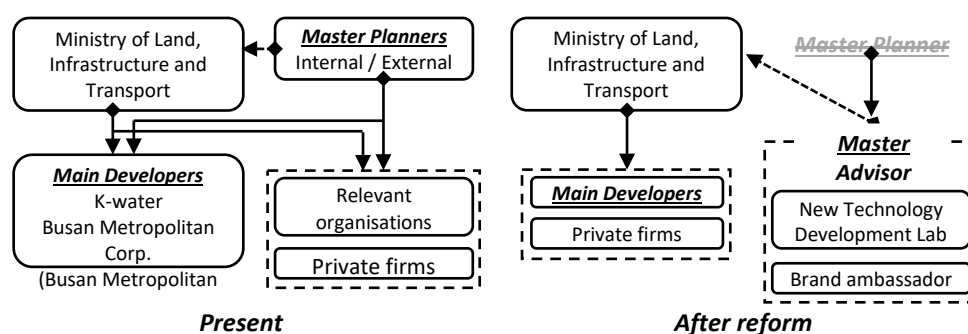


Figure 7-12 Change of the role of Master Planner for a national pilot smart city project (source: Jeon, 2020)

However, in 2020, PCFIR decided to change the role of master planners into a type of consultant (Master Adviser). The role has been considerably reduced over 18 months. The master advisor plays a role as a consultant by suggesting smart city technologies, policies and programmes, and as a brand ambassador by introducing Eco-delta City to citizens and foreigners. The Ministry of Land, Infrastructure and Transport announced that,

The change of the role of master planner should be needed due to the collision of authority between the ministry and master planner. It took a huge amount of time to compromise if they had completely

different opinions. There were problems if main developers had to conduct a business urgently. The change of the role of master planner could resolve such issues (Jeon, 2020). [code: circulation of idea – key actors and their relationships / local context – political and community issue]

Some argue that this was brought about as a result of strict regulations (Jeon, 2020). Whatever the reason may be, the national pilot smart city project will become another government-led regeneration project. Consequently, the shrinkage of the role of master planners would limit the mobilisation of the international idea within Eco-delta City even though policy mobility in a global and international level occurred through various ways. According to Dolowitz and Marsh (2000), inappropriate transfer within policy mobility is a situation in which policies in a particular space are adopted negligently. In the Korean political system, it seems that local actors, institutions and cultures did not fit well for policy mobility in the local area (Schäfer, 2017). Thereby, initiatives and interventions from another context were not well adopted in Korean society and this has impacted knowledge and policy circulation within the smart city project.

Discussion & Conclusion

This chapter explored the implementation of Eco-delta City through the theoretical framework of policy mobility. In South Korea, the concept of a smart city comes from the idea of U-City, an urban space in which ubiquitous technology is embedded to improve urban functions and the quality of citizens' life. Based on the publication of the Smart City Master Plan, the Eco-delta City project has been implemented. The project has been designated as one of two national pilot smart city projects and is supervised by the Presidential Committee on the Fourth Industrial Revolution (PCFIR) even though main developers are K-water and Busan Metropolitan Corporation.

PCFIR draws the big picture of a smart city whereas the main developers focus on constructing urban infrastructures and buildings.

The policy mobility of Eco-delta City consists of three different groups: global level approach, international level approach and local level approach. They worked for the successful delivery of Eco-delta City individually but the interaction among three different groups created an unstable assemblage. This resulted in the failure of policy mobility, an inappropriate transfer. For instance, in terms of the global level aspect, the external master planner endeavoured to collect disseminated global trendy interventions to create a successful smart city. Based on his knowledge and experience, he promoted the adoption of some of them. Consequently, online and offline citizen participation programmes were created and operated to date. Such initiatives are 'Smart City 1st Avenue', 'living lab hub', 'water resource management system' and 'Key Performance Indicators for smart city'.

PCFIR (a group of central government agencies which lead the implementation of national pilot smart city) also played a certain role in the international level, by allocating tasks for individual members of PCFIR for successful implementation of urban regeneration. Governmental ministries and agencies within PCFIR built a concrete relationship among national governments, private firms and international organisations across the world. Through such relationships, technologies, knowledge, idea, programmes and policies regarding a smart city were imported from and exported to some countries and cities. Academia and research institutions also facilitated this tendency by participating in international conferences and seminars.

At the local level, South Korean society tends to depend on traditional experts and processes. Local urban planning system and guidelines were essential for effective and efficient implementation of urban regeneration. However, this was not fit for the delivery of a smart city due to different perceptions of a smart city among actors,

strict regulations and bureaucratic procedures, and the role of master planner as a consultant. Since regulations and bureaucratic procedures for policy making were strictly maintained for traditional urban development, flexibility caused by policy mobility could not be embedded in the project. The rigid and stubborn old governance system was the culmination of policy mobility interruption. As a result of the interaction between the international idea and policy and local contexts, the Eco-delta City project has been delayed. It has been delivered in a very similar way to the two previous urban regeneration projects even though the concept of a smart city was planned completely differently from the idea of property-led urban regeneration.

Consequently, conflicts among the above three different levels contributed to making policy mobility for the delivery of Eco-delta City unstable. In turn, this led to an inappropriate transfer (Stein et al., 2017), which is one of the three⁷⁹ types of policy mobility failure.

In another aspect, policy mobility has become more sophisticated and varied due to various types of actors who are engaged in the circulation of knowledge and policy within Eco-delta City such as master planners, main developers, researchers, and PCFIR. In particular, since PCFIR is a governance system which consists of diverse government agencies, the scope of actors was extended markedly. Such actors' diverse ways of collecting and sharing disseminated global trendy ideas through different types of international relationships facilitated knowledge and policy circulation. Moreover, the scope of knowledge and policy is widened within Eco-delta City. Master planners suggested and attempted to transfer a clear form of disseminated global trendy ideas whilst main

⁷⁹ The other two are 'uninformed transfer' and 'incomplete transfer' DOLOWITZ, D. P. & MARSH, D. 2000. Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance*, 13, 5-23.. The former occurs because the borrowing country may have insufficient information about the policy and institution and how it operates in the country from which it is transferred. The latter happens when crucial elements of what made the policy or institutional structure a success in the originating country may not be transferred.

developers were interested in technologies and applications that worked well in other contexts.

Through the effort of diverse actors who concentrated on exporting the smart city model and relevant policies/initiatives/platforms/technologies to other countries, Eco-delta City was commercialised as a smart city model. As stated in the context chapter of this research, the South Korean government was historically interested in encouraging exportation during the era when the country was rapidly developing. Civil servants and citizens arguably had the perception that export is good for the country and this contributed to creating a proactive approach by civil servants for sharing the Korean-style smart city model. This phenomenon would become a good source for further research regarding policy mobility within the Korean context in the future.

Chapter 8 Discussion & Conclusion

The last three chapters explored three consecutive urban regeneration projects between the 1990s and 2010s in Busan, South Korea. Although two of them are still being implemented, the chapters describe the delivery process of urban regeneration in Busan and characteristics of individual projects. By comparing such individual urban regeneration projects in the 1990s, 2000s, and 2010s, this chapter aims to articulate the development of the Korean style urban regeneration idea. Furthermore, it explores the evolution of Korean style policy mobility within the implementation of urban regeneration over time (Wong and Băing, 2018). The following section will illustrate: (1) the change of context in Busan, South Korea over the last 30 years; (2) three distinctive characteristics of policy mobility within the empirical case studies respectively; (3) the evolution of the idea of sustainability within urban regeneration.

The significance of the change of context in Busan, South Korea over the last 30 years from a policy mobilities perspective

As stated in the literature review, from the policy mobilities perspective, the importance lies in specific details that pinpoint what enables policy mobility. In this research, the local context works for such specific details. In particular, the city of Busan and South Korea have characteristics as a developmental state – compared to Anglo-American cases – which have long traditions of a strong bureaucratic management system. Hence, the state-led governance system hugely tended to impact on policymaking and policy delivery process. Since the local context includes such circumstances, it is crucial to investigate the local context in detail to explore policy mobility in the local area over three decades.

In this background, the change of the policymaking process, with the advent of local autonomy, is one of the most significant issues. Before the 1990s, policy making in South Korea was decided by a

strict top-down approach from the national government. However, in 1995, with the establishment of local councils in 1991, the scope of local affairs and local authority has been expanding and the beginning of a local autonomous system under the Local Autonomy Act decentralised the authority for policymaking. Busan Metropolitan City carried out political and administrative decision making while maintaining relative independence from the central government. The local government was able to handle and manage jurisdiction, the promotion of residents' welfare, the promotion of industries including agriculture, forestry, trade, factories, local development, and the establishment and management of public and private facilities for residents (National Geography Information Institute, 2017a). This change of role (Allen and Cochrane, 2007), which also led to the movement of power, encouraged the local government to learn and import global knowledge and policy.

Globalisation also has hugely impacted policy mobility as well as the urban regeneration project in the city of Busan. Since the 1990s, industrial restructuring dominated across the world. Most countries concentrated on tertiary industry, which consists of the production of services, instead of the manufacturing industry, the end products. Under the concept of urban entrepreneurialism (Harvey, 1989), spatiotemporal barriers have been removed and globalisation with cross-border economic processes, such as the flow of labour, goods, raw materials, tourists, capital and rapid information exchange across nations, was accelerated (Sassen, 1991). In this circumstance, many countries and cities had to compete with each other, that is international competition (Marsh and Sharman, 2009), to become an attractive space for the tourism industry and to attract global investors for the next generation of industries. Regarding Busan Metropolitan City, the city government sought to create a couple of industrial clusters focusing on media, film and the tourism industry. Moreover, the local government endeavoured to develop a city brand for Busan based on geographical resources, the waterfront area, and

the success of Busan International Film Festival, one of the largest annual film festivals in Asia.

Due to intensive globalisation, there has been much more global inter-connectivity. In particular, the development of Information and Communication Technology (ICT) and the Internet of Things (IoT), a multi-level of groups and governance systems have been able to inter-connect. For instance, developers, private firms, and urban planners tended to work globally. Historically, in South Korea, the policy making process was a government-led approach usually led by civil servants. However, from the 2000s, experts from diverse fields, architecture, urban planning, economy and government agencies, were actively able to be involved in the policymaking process even though the central government has still played a role as a main policy maker with a strong authority. A globally inter-connected society based on developed technology accelerated such a tendency. Both national and local governments tried to hire experts who had abundant international work experience to deflect them into newly created urban policies. This resulted in the creation of various types of government agencies, which have proper authorities over human resources and budget execution, the so-called 'Presidential Committee' on diverse fields, playing a significant role as outgoing/ingoining policy consultants (McCann, 2011) within the policy making process.

With the temporal and spatial setting of three decades, the role of citizens has changed considerably (Dolowitz and Marsh, 2000). As travelling abroad became a common activity for citizens, they were familiar with foreign case studies, the outcomes of urban regeneration projects such as London Dockland, Sydney Opera House and Yokohama Minato Mirai 21 and their increasing understanding influenced the delivery of urban regeneration projects. They have been given more opportunities to join consultations during the implementation of urban regeneration as one of the committee members. In consultations, they suggested appropriate ideas based

on fieldtrips and personal experience, as incoming policy consultants (McCann, 2011) through interpersonal interactions (Evans, 2009), and such ideas were reflected in the policymaking process. In these circumstances, developers, urban planners and civil servants tended to focus on citizens' opinions and continuously encouraged them to join consultations as much as possible.

Finally, the government's support and responses in specific time periods have also changed and hugely impacted policy mobility. In the first large-scale urban regeneration project in the 1990s, the local government struggled to resolve financial problems during the delivery of the urban regeneration project. The city government could not afford to consider other issues except the financial problem since they did not have any knowledge and experience about the implementation of property-led urban regeneration. The city government had nothing to do except promoting enough funds for the development project through land sales. In the 2000s, the second urban regeneration project had clear aims: returning waterfront areas to citizens and revitalising the former urban centre surrounding the old port area. To achieve such aims, both the South Korean government and Busan Metropolitan City government began to attract domestic/foreign investors by creating business-friendly policies and local rules. Furthermore, they endeavoured to create green space and an eco-friendly built environment. In this circumstance, they actively learned from global best examples and programmes (Marsh and Sharman, 2009). In the 2010s, the ageing community and the fourth industrial revolution were priorities in urban issues. These agendas directly connected with the decline of the local economy as well as local space. To resolve such urban problems, the South Korean government was particularly interested in creating a new society by using a globally leading concept, representations (Temenos and McCann, 2013) and global imaginaries (Peck and Theodore, 2010) of a smart city. Consequently, the national government attempted to use a new approach, creating a new government agency or hiring external

experts, as an incoming policy consultant (McCann, 2011) who had practical power and a reputation (Werner and Strambach, 2018) based on abundant professional work experience and knowledge about smart cities, instead of the central government's conventional way, institutional and financial support.

Although both the external and internal context of Busan has been varied, the city of Busan in specific periods and contexts shared a very similar experience, the circulation of the knowledge and policy idea. Furthermore, at some point, empirical cases, legacies from the implementation of such cases in Busan Metropolitan City became a source of internationally circulating ideas. Traditionally and historically, it has been common that South Korea, including civil servants, private firms, and the public, learned and imported advanced knowledge, technology and experience from developed countries and endeavoured to sell and export even better ideas, practices and applications on the basis of the imported one to other contexts. This tendency reflected on urban issues and the policymaking process. As a result, policy mobility happened in various ways unintentionally and unexpectedly over time. This will be summarised and addressed a little more clearly in the last section of this chapter.

Three distinctive characteristics of policy mobility dependent on empirical cases

Evolving within the specific local context, the policy mobility process occurred embedded in individual urban regeneration projects. This research revealed that urban regeneration and the knowledge and policy circulation process were developed and impacted by the change in the local context over time.

Meaningful experiment of policy mobility

In the Centum City project, the policy mobility process was not very active but experimentally occurred. Civil servants in the local

government mainly played a role as an actor during the mobilisation process. With the beginning of local autonomy, they had authorities and powers (McCann, 2011) to budget in the regeneration project. The withdrawal of the biggest private investor and the financial crisis in 1997 endowed them with much more responsibility and authority for the successful delivery of the project. As a result, they initially worked as an incoming policy consultant (McCann, 2011) to learn or to emulate the global best examples and ideas (Rose, 1991) such as the 'Flagship development' in Japan, and the idea of 'Teleport' in U.S. and Russia.

Centum City was initially planned strategically. Civil servants in the local government attempted to learn a clear form of global case studies (Rose, 1991) since they did not have enough knowledge and experience about the delivery of a large-scale urban regeneration project. The actors (civil servants) usually focused on a visible and clear form of policies and programmes. Although Williams (2017) asserted that the entire translation of international knowledge and policy is inappropriate and inefficient, it was the easiest way for civil servants to simply follow famous international best examples and practices. For instance, Public Private Partnership, which was a governance system of Minato Mirai 21, Yokohama, Japan, was transferred to the city of Busan. Furthermore, major policies in Minato Mirai 21, for example, land use planning and a land management system, were also introduced and reflected in the Centum City project. However, due to the financial crisis in the 1990s, such policy mobility processes were aborted and abandoned. Through this change, only civil servants tried to learn and import policies and knowledge of high-tech industrial complex from other countries. Such contextually modified planning replaced the original strategic planning by focusing only on securing funds for the delivery of the project. This resulted in the occurrence of the knowledge and policy circulation process experimentally.

Since civil servants managed the implementation of the Centum City project, most of the policy mobility process occurred in traditional space. For example, governmental agents and foreign civil servants usually used a meeting room in governmental institutions and visited best examples and practices together under the name of a fieldtrip. In such varied places, they shared international ideas, policies and relevant experiences.

In summary, the local context and the increasing global competitiveness and industrial restructuring unintentionally promoted Busan Metropolitan City government to implement a large-scale urban regeneration. Through the project, the decline of urban areas and the advent of local autonomy accelerated the local government to emulate global knowledge and policy (Rose, 1991). However, due to economic issues, the city government had to follow a global organisation's instruction (International Monetary Fund) under the concept of coercion (Marsh and Sharman, 2009) and did not maintain the original strategic planning. This illustrated that the policy mobility process was begun but experimentally delivered in Centum City.

Proactive policy mobility through international dimensions

In the North Port project, the policy mobility process occurred actively compared to the previous urban regeneration project. In particular, international dimensions played a significant role in the process. Based on international strands, the North Port project was implemented by hybridisation and synthesis (Rose, 1991) or a learning mechanism (Marsh and Sharman, 2009).

Firstly, the scope of actors was widened. In addition to civil servants, private developers, investors, architects, urban planners, and even citizens played a role as main actors throughout the policy mobility process. In particular, the legacy of Centum City and the economic crisis in 2008 forced the main developer (Busan Port Authority) to secure sufficient funds. Consequently, Busan Port Authority endeavoured to attract international investors throughout the project.

International investors, as an outgoing policy consultant (McCann, 2011), suggested business-friendly policies and programmes which were generally used in foreign countries. As main developers in South Korea (usually governments and government agencies) emphasised community and citizen participation in the policymaking process of urban regeneration projects, roundtable and public consultations were drawn into the centre of the circuit of policy mobility. In the North Port project, the Roundtable especially played an essential role in the delivery of urban regeneration as well as the policy mobility process. It provided civil servants with their suggestions in a community engaged consultation due to the change of role (Dolowitz and Marsh, 2000).

Furthermore, the scope of knowledge and policy was also expanded. The most impressive global idea reflected in the North Port project was a Sydney model, a large-scale urban regeneration project surrounding Sydney Opera House. As the idea was strengthened by the former President of South Korea, it became the ultimate goal, a global imaginary (Peck and Theodore, 2010) of the North Port project and was reflected considerably in the project. Also, detailed policies and programmes about deregulation were suggested. Although they did not directly affect the Korean policies, it was a meaningful discovery that a detailed idea and experience was able to be transferred, which had proved impossible in the previous empirical case. In addition to successful policies and programmes, concepts and detailed programmes, such as the green building certificate system, were mobilised and reflected in the project.

Diverse types of space were used for the mobilisation of knowledge and policy. For instance, through a Roundtable meeting, a new urban regeneration approach in Hamburg, Germany was suggested. The Roundtable, a type of community engaged consultation, was previously regarded as a simple procedure during the delivery of a planning project. However, as the policymaking process became transparent and democratic, it newly acquired power (McCann, 2011)

within the process. This led to a complete change in the North Port master plan. Preliminary talks, private meetings, with private investors also worked as a new type of space in which policy mobility happened. They were not meetings for negotiation but for articulating individual requests before participating in an official bid for the main developer of the urban regeneration project. However, to attract a preferred investor, Busan Port Authority critically considered agendas raised in these meetings throughout the delivery process.

The failure of previous policy mobility

The policy mobility process in Eco-delta City was more developed and complicated compared to the North Port project, but the outcome of the project was in stark contrast to the previous case study. Regardless of the evolution of policy mobility, the mobilisation process was examined as a failure of policy mobility – inappropriate transfer (Stein et al., 2017).

In addition to new actors introduced in the North Port project, academia and a government agency, the Presidential Committee on the Fourth Industrial Revolution (PCFIR), played a significant role in the policy mobility process of Eco-delta City. The government agency was created by the South Korean government, aiming to achieve an ideal city model in accordance with the Fourth Industrial Revolution. An external master planner in the group, in particular, worked as an incoming policy consultant (McCann, 2011) based on his power, reputation, knowledge, and experience (Werner and Strambach, 2018, Raco, 2018). Academia worked as an outgoing policy consultant (McCann, 2011) by exporting Korean style knowledge and technology to foreign contexts. They usually used the Memorandum of Understanding (MOU) as a path for such transfer. Moreover, as the bottom-up approach in the policymaking process was strengthened, the number of opportunities for citizen participation increased.

The spectrum of circulated resources was also expanded a little more compared to the North Port Redevelopment. Due to the

development of technology, part of an idea, personal experience and even an ideal image impacted a specific part of the urban regeneration project. In this period, a tiny idea in one context was able to be developed into a programme in another context. For instance, the idea of a data share webpage and online community participation platform was mobilised and resulted in the creation of 'Smart City 1st Avenue' and 'living lab hub' in Eco-delta City.

As the actors and circulated policies and programmes became diverse, the space where the policy mobility process happens developed over time. Policy mobility processes occurred in more diverse spatial settings, not being limited to conventional spaces. Micro-space, both conference and forum, was used as a place for policy mobility. As the role of academia increased in the current society, such space became a huge opportunity to establish official partnerships for sharing knowledge, ideas and policies. Policy mobility in Eco-delta City also occurred in an intangible space such as online (official website of Eco-delta City), academic conference and informal delegate meetings. In detail, the external master planner's experience or idea, which was used in another context, was mobilised into the Eco-delta City project without the embeddedness on a physical space.

Regardless of the evolution of the policy mobility process compared to the process of two previous empirical cases, strict regulations in the local area hampered the policy mobility process. Due to the conventional Acts regarding architecture and urban planning, circulated policies and programmes did not work well in the context of Busan. This led to the shrinkage of the role of the external master planner (Dolowitz and Marsh, 2000) and resulted in inappropriate transfer (Stein et al., 2017) within policy mobility.

The idea of sustainability within urban regeneration

This research also discovered that the idea of sustainability within urban regeneration has been strengthened, although it has been embedded deeply in policy mobility for 30 years. Urban regeneration is a comprehensive and integrated vision and action to address urban problems through a lasting improvement in the economic, physical, social and environmental condition of an area (Roberts and Sykes, 2000). Sustainability, as an umbrella concept, emphasises a balance among the three pillars of economic vitality, environmental protection and social equity. Based on the emphasis on the partnership of such three aspects with strategic approaches, the urban regeneration project can perform as an enabling role in achieving sustainability.

In the real world, however, the three pillars are not weighed equally, and the prioritisation of the three pillars within urban regeneration is usually selected by an assemblage of specific time, space, developer's aims and local context. This is similar to the three empirical cases in Busan. The sustainability idea within the first empirical case, Centum City, was not fully manifested but partly revealed. Then, the following empirical cases, North Port and Eco-delta City, became a more complete form of sustainable models over time (Figure 8-1). Based on this tendency, it seemed that the idea of sustainability became more embedded in policy mobility over time.

Before the Centum City project between the 1970s and 1990s, Busan Metropolitan City did not care about the 'sustainability' agenda in the urban planning process.

It is absurd that we try to compare the outcomes of the urban planning (regeneration) projects which were implemented in a totally different time and context. In the 1970s, when I worked as a civil servant in the city of Busan, we were unable to consider 'Planning for tomorrow or the future' under the idea of sustainability. We just had to develop

urban space and local economy as much as we could (Interview with former officer of Development Administrative Management Bureau of Busan Metropolitan City, 2018).

However, from Centum City, a large-scale flagship development project, a few sustainable approaches within the project were shown in practice. Civil servants in the local government did not only think about the construction of the project but also seriously considered the management of the project. In particular, due to the severe financial crisis issues, economic sustainability was relatively emphasized in the flagship development project.

Furthermore, the city government endeavoured to learn and adopt social and environmental sustainability practices, such as community participation within the policy making process and green building technologies, from other contexts. However, such efforts to maintain social and environmental sustainability did not work productively compared to those for economic sustainability. At the end of the project, civil servants did not fully realise sustainable outcomes within the project. Critics argued that the project did not achieve its original aim, 'creating an information technology industry cluster' very well. Thus, the Centum City project was measured as a selected sustainable regeneration project concerning the economic perspective. Hence, policy mobility was also shaped by this tendency.

It could be said that the Centum City project was not implemented as was originally planned. Yet, through a series of contextually modified planning, the project overcame several economic challenges. In this background, Busan Metropolitan City government should be evaluated as a great successor who endeavoured to achieve economic sustainability (Interview with former officer of the

North Port Redevelopment Project of Busan Port Authority, 2018).

The meaning of sustainability has been developed and embedded even deeper in the following large-scale urban regeneration project, North Port Redevelopment. The main aim of the North Port project was to create a sustainable waterfront area which citizens can enjoy with their families. Busan Port Authority (main developer), thus, endeavoured to focus on the establishment of an eco-friendly space with economic benefits. Policy mobility was influenced by this objective. The authority focused on 'successful waterfront regeneration projects' across the world, such as Sydney, London, Yokohama and Hamburg, as the best examples and practices. In this background, programmes and partnerships that selectively merge economic and environmental aims throughout the idea of urban regeneration were emphasised in policy mobility.

Regarding economic sustainability, based on the legacy of Centum City, Busan Port Authority strove to secure sufficient funds by attracting international investors, large and financially stable private firms. In terms of environmental sustainability, the idea was manifested physically in the master plan of North Port Redevelopment - sustainable urban design (eg. district heating/cooling, solar thermal); high performance buildings (eg. passive design, green roofs); green building certification; and management systems (eg. urban drainage systems, greywater recycling). Meanwhile, since the Roundtable played a significant role in the North Port project, the interest in community participation began to increase even though a top-down approach still dominated in the policymaking process of urban regeneration. This was interpreted as the actual beginning, albeit limited, of social sustainability in the urban regeneration project. As a result, Busan Port Authority was able to promote an evenly balanced sustainability idea within policy mobility as well as the outcomes of urban regeneration compared to the Centum City project.

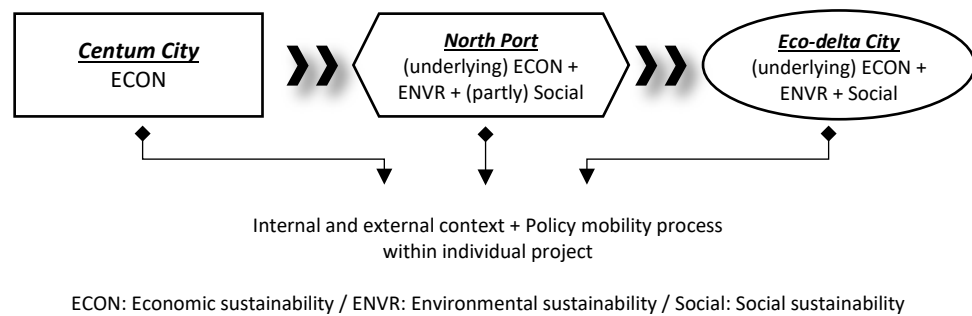


Figure 8-1 the development of the idea of sustainability (resource: author)

Similar to the North Port project, the Eco-delta City project also aimed to achieve environmental sustainability due to its geographical location. K-water (as a main developer) was responsible for the objective because the organisation managed whole water resources within South Korea. Based on its experience of exporting water management technologies over 55 countries since 1994, it suggested a smart water management system to prevent water-related disasters, a water filtering mechanism, and a renewable energy supply system by using water resources. K-water believed that such applications will not only make the Eco-delta City an eco-friendly space but also increase the quality of life of the local residents.

Furthermore, as the concept of a smart city became popular across the world, the South Korean government was interested in the idea. Crivello defined a smart city as 'more intelligent, sustainable, and inclusive cities through the promotion of appropriate technological innovations' (Crivello, 2014, p. 910). As the word, sustainable, was included in the definition of a smart city, the national government was keen to achieve economic sustainability by designating the fourth industry as a new growth machine for the future. In detail, the external master planner and the PCFIR planned to create an industrial cluster which consists of start-ups, focusing on ICT and IoT, and recommended a designation of a deregulation area to incubate innovative start-ups productively.

Compared to the two previous empirical cases, on the other hand, social sustainability is the most developed field in Eco-delta City. In particular, community participation was significantly strengthened in the idea of a smart city. The ideal society is a society managed by a completely democratic approach and the ideal democracy can be established by active citizen participation in the policymaking process. This circumstance was also reflected in policy mobility. Urban planners, civil servants and developers believed that the development of ICT and IoT will contribute to achieve such an ideal aim. Thus, they focused on online platforms for community participation in other contexts and promoted creating similar ones, as best practices, in Eco-delta City. Relevant information and technology were actively shared by academia and civil servants in conferences and seminars. These approaches describe the materialised form of policy mobility seeking to achieve social sustainability within the urban regeneration project.

Research questions and answers

Based on three empirical chapters, the characteristics of individual urban regeneration and those of the policy mobility process within each project were revealed. Also, through the exploration and comparison amongst three empirical case studies, this research generalised the development of the urban regeneration idea in Busan, South Korea, and the evolution of the policy mobility process over three decades. The summary of this information can be the answers to two main research questions in this study:

- To what extent has policy mobility been incorporated into an individual urban regeneration project and how has this been changed over time through three different projects?

Policy mobility was incorporated into Centum City very slightly and it was almost fully operated in the North Port Redevelopment Project. In the Eco-delta City, the process became more sophisticated and

developed. However, due to specific local contexts, it was not successful and was examined as the failure of policy mobility.

In detail, regarding Centum City, the policy mobility process initially and partly occurred. Through the fieldwork and case study, civil servants led in learning the globally circulated international idea of urban regeneration. However, due to the rapid development of technology and the unexpected financial crisis, the strategic planning was changed into a series of contextually modified planning. In this circumstance, the internationally circulated idea such as Teleport City was not mobilised, and instead of it, a part of the programmes and the governance system were introduced from another country and adapted in the local context.

The mobilisation process became productive in the North Port project. Based on the legacies of Centum City, the main developer, Busan Port Authority, prepared potential challenges and used their resources, global network, advanced sustainable approaches and capable social groups effectively. In particular, by learning global best practices from Sydney, Australia, and Dubai, United Arab Emirates, the development was able to set up their aims. International investors and firms also played a critical role within the policy mobility process. A roundtable which consisted of diverse levels of experts and citizens impacted on the master plan through individual experience of the circuit of knowledge and policy.

In the last empirical case study, Eco-delta City, the policy mobility process was embedded in the project both widely and in-depth even though the result of the knowledge and policy circulation was not entirely successful. Compared to two previous cases, the scope of actors, knowledge and policy and space engaged in the policy mobility process broadened. In particular, the role of a private master planner, governmental organisations and academia became significant (Raco, 2018) throughout the Eco-delta City project as well as policy mobility. However, the inappropriate transfer (Dolowitz and Marsh, 2000) resulted in the circulation of knowledge and policy

becoming a failure, particularly due to rigid local contexts against the mobilising process.

Overall, between the 1990s and 2010s, the policy mobility process was developed, restructured, and more engaged in urban regeneration over time. Thereby, networks (assemblage of actors, knowledge and policy, space, and local contexts) became more widened and influenced over three decades.

- What is the relative influence of local contextual factors and international policy mobilities in determining the narrative of urban regeneration in Busan and how has this changed over time?

Consequently, through the local contextual factors and international policy mobility process, the idea of urban regeneration in Busan, South Korea has been changed in a sustainable way over 30 years. In Centum City, the local context, rather than international ideas, affected the economic perspective of sustainability on the project. Regarding the North Port project, the environmental perspective of sustainability was concentrated through the mobilisation of best practices. Moreover, the social aspect started to be considered within the project and this was strongly strengthened by developers and central government based on the predominant international idea, the concept of smart city, in the Eco-delta City project.

During the delivery of the Centum City project, South Korea suffered from the financial crisis in 1998 and the withdrawal of the biggest investor. As the main developer, such local contexts made the Busan Metropolitan City government focus on maintaining economic sustainability in order to implement the first large-scale urban regeneration project successfully. The governance system of Minato Mirai 21, Yokohama, Japan, which was mobilised into Centum City, also suggested management skills such as land sale methodologies for securing funds and contracting methodologies with small scale

private investors effectively. These contributed to achieve the economic aspect of sustainability with the project.

In the North Port project, the developer focused on circulated global ideas about the environmental perspective of sustainability such as a green building certificate and creating a green space and waterfront space. By trying to adapt such concepts to the local area, civil servants and the Busan Port Authority also considered and reflected such a tendency on the idea of urban regeneration. Furthermore, the Roundtable, a group of experts, social work organisations and citizens, strengthened the social perspective of sustainability within North Port by expressing its opinion actively in the policymaking process. There was an opinion that community and citizen participation should be required in the urban regeneration project in Centum City, but it was not successful.

The social aspect of sustainability was fundamentally embedded in the idea of a smart city so that it was naturally emphasised in Eco-delta City. By creating an online-based citizen-led policy suggestion circumstance, developers and master planners encouraged citizens to participate in the delivery of urban regeneration. Furthermore, both the central and local government aimed to develop the next generation of an industrial cluster, focusing on Information Technology and Internet of Things, through the implementation of Eco-delta City. This can be represented as a huge consideration of economic sustainability. Lastly, the geographical location of Eco-delta City, surrounded by a waterfront area, led master planners and developers to contemplate environmental sustainability. To preserve the quality of water during the delivery of the project, K-water adopted a number of water management systems, which were already circulated and examined positively across the world.

Consequently, in Busan, South Korea, the idea of sustainability was not fully embedded in urban regeneration. However, the level of engagement of sustainability in urban regeneration increased over time: from the economic perspective of sustainability to the

environmental and social aspect of sustainability. Thus, it can be interpreted that the concept of urban regeneration in Busan, South Korea has evolved into a sustainable way over three consecutive urban regeneration projects.

Contribution and Reflection

As stated repeatedly over this research, there are largely three types of contributions of this research. Firstly, by investigating three consecutive empirical case studies, as a longitudinal study, this research overcomes limitations of a single case study: the lack of methodological guidelines (Yin, 2009), subjectivity depending on researchers (Verschuren, 2003), and generalisability (King et al., 1994, cited in Willis, 2014). To compare three empirical case studies, there should be a type of systemic procedures; for example, in this research, there is an investigation focusing on actors who share policy and knowledge, the mobilisation of policy and knowledge and the specific location where actors share ideas in an individual case study) which can be easily missed in a single case study methodology. Such an approach relatively reduces the subjectivity of a research. Furthermore, three consecutive case studies enable generalising the characteristics of the local area, the city of Busan, regarding both urban regeneration and policy mobility. Since the context has been maintained over three empirical cases, there is no need to consider the variables of the local context surrounding an individual project. This improves generalisability which is not enough for a single case study method.

Secondly, this research contributes to fully understanding the delivery of urban regeneration with policy mobility by using multi-level analysis. In the current era, a large-scale urban regeneration cannot be implemented by a few main actors (based on top-down approach) but diverse key actors and the relationships between them. In particular, since policy mobility within the large-scale project occurs among various levels of the governance system (for example,

between national government and local government, between global development corporation and local government and between national government and international organisation), the multi-level approach helps to investigate and to fully understand urban regeneration. Furthermore, this research contributes to providing researchers with an opportunity for conducting further research regarding the extent to which the aims and outcomes of urban regeneration can be developed, changed or synthesised by specific relationships among diverse actors.

Lastly, this research can be meaningful as it scrutinised the local city of Busan, South Korea. There is plenty of research which uses an empirical case study approach. For this, various types of cities in the world were investigated, explored and examined. Meanwhile, researchers usually tend to use global cities or capital cities as empirical cases. There could be many reasons for this, but one of the most important factors is that readers can easily understand the context, policies and politics of those cities. These are priorities for an empirical case study within qualitative research. Although the city of Busan is not a global city, it has rich contexts such as a unique history, identity and culture. It deserves to be analysed systemically, through urban theories. Since this research allows enough time and space to explain such background of the city with abundant resources of three consecutive case studies over three decades, it contributes to academia to consider the way in which the Asian local city has responded to urbanisation, globalisation, industrial restructure and democratisation at large.

In addition to the three major contributions, there are three reflections of this study found in the very last stage of research. First and foremost, this research uses a theoretical framework of policy mobility. Such theoretical framing is relevantly applicable to the specific context of Busan, South Korea since there is a tendency for urban policies to be transferred from foreign contexts and adapted to local areas. Although the theoretical framework cannot perfectly

explain actual practices, it is meaningful to discuss a conventional large-scale property-led development through a relevant new perspective. This would enlarge the scope of policy mobility literature, specifically in the Korean context.

Secondly, the limitations of this research are as follows. The findings of this research are mainly based on elite interviews and official documentations. This means that more detailed, nuanced information necessary to address episodes of actual practice was somewhat limited in this research. Furthermore, official documentations contained a number of rhetoric expressions which lacked clear explanations or definitions, making it difficult to interpret the implications of such words in actual practices. If these limitations are supplemented in the future with various qualitative materials, the research outcomes will be strengthened. Moreover, the implementation of two of three empirical case studies is still on-going. In such a context, this research is limited to comparing the delivery process of projects and their actual outcomes respectively. By examining the extent to which the delivery process is related to its outcomes, policy mobility within the implementation of urban regeneration can be investigated more clearly. Although a comparison of empirical cases was not the aim of this research, it was somewhat required when the evolution of the urban regeneration idea through policy mobility was traced over time. However, there were no criteria, indicators or guidelines for comparing three empirical case studies. The researcher strongly believes this research would be improved further if some quantitative-based measure supported the analysis for comparison. So, in a further study, hopefully, this could be improved through a mixed method study.

Lastly, this research provides lessons for urban policy and planning. Globalisation and urban competitiveness make politicians, policy makers, civil servants, planners and developers import and export global leading examples and localised practices competitively. They

attempt to copy and paste a complete form of policy and knowledge, which is successful in one context. However, policy can be mobilised not only as a form of a complete product, but also as a single idea or knowledge. In the current era, there is a myriad of complicated contexts, actors and relationships to be considered during the delivery of urban policy and planning. Thus, a single idea or knowledge is transferred more effectively and efficiently. This finding about the evolution of policy mobility in the local context is quite useful in practice because it can become a good lesson for urban policy and planning. For instance, in South Korea, the national government tried to export a Korean-style city model to underdeveloped countries (particularly Southeast Asia). As many civil servants still have an idea that a complete form of city model should be mobilised, a change of their perceptive might be helpful to improve the performance of policy and knowledge mobilisation.

Conclusion – the very last summary of this research

This research explores the way in which policy mobility occurred differently in three individual projects, which have taken place in Busan, South Korea over three decades. As summarised in table 8-1, three empirical cases presented in this study had individual aims and concepts: creating a high-tech industrial complex in the 1990s (Centum City), creating a sustainable waterfront area in the 2000s (North Port), and building a smart city in the 2010s (Eco-delta City). With supportive external and internal local contexts, policy mobility happens through the assemblage of the following factors: actors engaged in the mobilisation process, circulated knowledge and policy and a proper space to occur. Depending on the power dynamics (Werner and Strambach, 2018) of such factors, each assemblage can result in different patterns of policy mobility. In Busan, the policy mobility process began experimentally in Centum City, but almost fully developed as a conventional model in North Port. In Eco-delta City, policy mobility partly emerged as a combination of diverse

actors in various types of space, but it eventually resulted in inappropriate transfer, particularly hampered by a traditional governance system, a policy making framework, and stubborn regulations in the local context, leading to the failure of policy mobility.

Project		Centum City	North Port	Eco-delta City
Period		1990s	2000s	2010s
Aim		High-tech industrial complex	Sustainable waterfront area	Smart City
Background		<ul style="list-style-type: none">Financial crisis in 1997Withdrawal of the largest investor	<ul style="list-style-type: none">Globalization – easy to access global city model.Increasing interest in eco-friendly buildingsIncrease of community participation in society.Financial crisis in 2008	<ul style="list-style-type: none">Development of ICT and IoTMixture of diverse levels of approachesCommunity participation-led regenerationIncreasing interest in the 4th industrial revolutionLegacies of U-City (within Centum City)Stubborn regulations
Policy mobility	Main actors	<ul style="list-style-type: none">Civil servants in Busan	<ul style="list-style-type: none">Busan Port AuthorityCivil servants in BusanInternational investorsCitizens (community group)Developer (private firm)	<ul style="list-style-type: none">K-waterBusan Metropolitan CorporationCivil servants in BusanPresidential committeeAcademiaCitizens
	Policy / knowledge	<ul style="list-style-type: none">A clear form of best example/practice/policy	<ul style="list-style-type: none">Ultimate aim of best examplesGlobal imaginariesRepresentationsPolicies (business-friendly)Land-use planning	<ul style="list-style-type: none">Legacies & experiencesOnline platformCity model / programmes.Global imaginariesRepresentationsPolicies (business-friendly)Export-led approach
	Space	<ul style="list-style-type: none">Government institutions	<ul style="list-style-type: none">Government institutionsFieldtripRoundtablePublic consultation	<ul style="list-style-type: none">Government institutionsFieldtripConference / ForumPublic consultationInvisible space
	Summary	The introduction of policy mobility experimentally	The conventional model of policy mobility	The failure of policy mobility in innovative case study
		From simple and limited process (experimental) to complicated process (but resulted in the failure of policy mobility though)		
Priority in the project	Securing enough funding	Environmental approach Community participation	Community-led planning	
Sustainability perspective	Economic	Economic (Underlying) Environmental Social (Partly)	Economic (Underlying) Environmental Social	

Table 8-1 Summary of this research (source: author)

Furthermore, similar to the development of policy mobility processes, the results of this research show that the idea of sustainability has been evolved and strengthened in urban regeneration over 30 years. To overcome the financial crisis and industrial restructure, securing economic sustainability became the priority issue in the Centum City project. Through the legacy of Centum City, developers in the North Port project endeavoured to attract private international investors and public funds in order to maintain economic sustainability. Moreover, to achieve the aim of the project, which was a sustainable waterfront area by creating eco-friendly spaces and adapting green technology within the built environment, environmental sustainability was also emphasised. The interest in social sustainability began in the North Port project. Then, as community and citizen participation-led planning became more active and significant in the Eco-delta City, social sustainability was more achieved.

Figure 8-2 visually summarises this research. Regarding the upper half, the square shape stands for international ideas regarding urban regeneration which consist of a group of programmes and policies. In Centum City, it seems as if a whole box since civil servants in Busan Metropolitan City tried to mobilise a very clear, complete form of an urban regeneration product. However, in North Port and Eco-delta City, this tendency was changed. Actors focused on individual programmes and practices which constituted urban regeneration in North Port whilst this became a more complicated form with the interaction of many elements in Eco-delta City. This was described as a group of small squares in the diagram. However, in Eco-delta City, due to the traditional regulations, the urban regeneration projects were not fully absorbed and embedded in the local context (Raco et al., 2016). When it comes to the bottom half, it shows a sort of outcome of urban regeneration and policy mobility. The three symbols in the bottom, a square, a half circle, and a triangle, stand for a local area in Busan. In Centum City, policy mobility initially

happened but it was not well integrated in urban regeneration. The level of integration between the international idea and the local area has been developed over time. Although resistance against sustainability became ameliorated over time, it was not removed substantially in the Eco-delta City due to regulations. If the urban regeneration project fitted really well with the local landscape, it could be much more like sustainable.

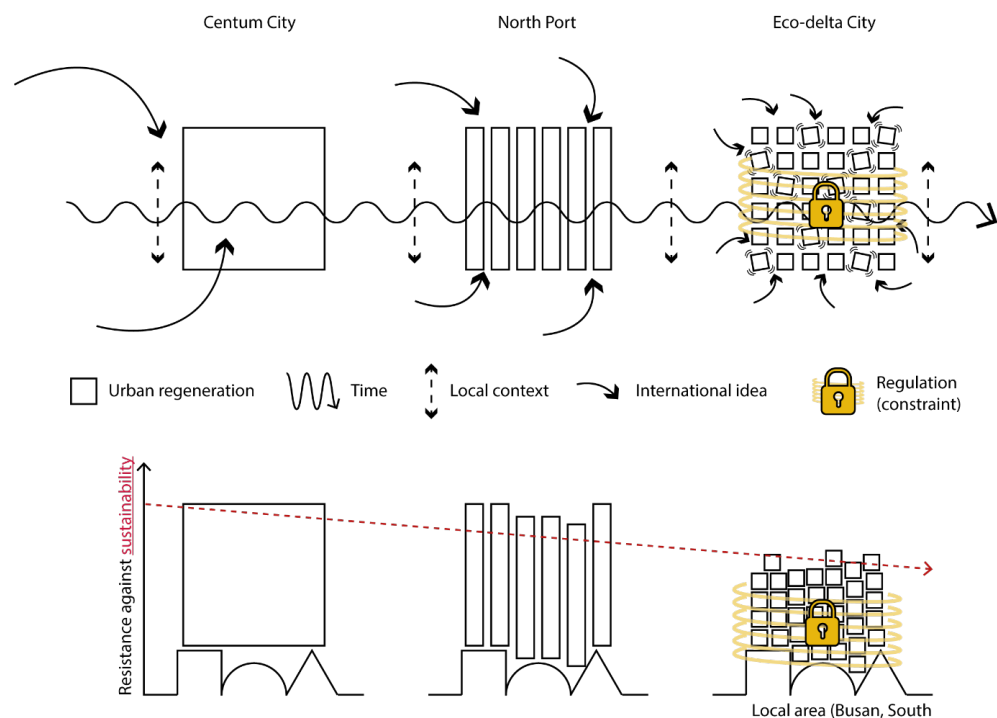


Figure 8-2 Conclusion of this research (source: author)

This research investigated the idea of urban regeneration in Busan, how it is reflected in an actual large-scale urban regeneration project and explored how such an idea has evolved over time through the interaction between the international idea and local context. It shows that in the context of Busan, ideas of urban regeneration and the policy mobility process have been developed and resulted in enhanced sustainability. Furthermore, they have been evolved by city-specific political and development processes, being influenced by underlying factors such as actors, knowledge and policies, and

spaces that impacted on the circuit of knowledge and policy processes.

Through these results, there are mainly three contributions – a longitudinal study, a multi-level analysis and an in-depth empirical study of Busan, South Korea. Moreover, although there is a methodological limitation of this research, the theoretical framework of policy mobility is useful to achieve the aims of this research due to not only the characteristics of Busan Metropolitan City, a vibrant city, open to international influences, but also the complexity of the delivery of urban regeneration in the current era. Although this research is mainly based on the local context of Busan Metropolitan City, it would be interesting to explore how such a local tendency regarding urban planning and policy might also operate for other cities and countries and to compare the case of Busan with other contexts.

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Chapter 10 Appendices

Ethics Approval

UCL RESEARCH ETHICS COMMITTEE
OFFICE FOR THE VICE PROVOST RESEARCH



24 November 2017

Professor Yvonne Rydin
Bartlett School of Planning
UCL

Dear Professor Rydin

Notification of Ethics Approval with Provisos

Project ID/Title: 12281/001: Mobilising the concept of urban regeneration with environmental sustainability. Focusing on a case of Centum City, Busan, South Korea

Further to your satisfactory responses to my comments, I am pleased to confirm in my capacity as Co-Chair of the UCL Research Ethics Committee (REC) that I have ethically approved the data collection element of your study until **16th October 2020**.

Ethical approval is subject to the following conditions.

Notification of Amendments to the Research

You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form'

<http://ethics.grad.ucl.ac.uk/responsibilities.php>

Adverse Event Reporting – Serious and Non-Serious

It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Final Report

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: <http://www.ucl.ac.uk/srs/governance-and-committees/resgov/code-of-conduct-research>
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research.


Yours sincerely



Dr Lynn Ang
Joint Chair, UCL Research Ethics Committee

Cc: Dongho Han

Risk Assessment Form

RISK ASSESSMENT FORM FIELD / LOCATION WORK																		
<p><i>The Approved Code of Practice - Management of Fieldwork should be referred to when completing this form</i> http://www.ucl.ac.uk/estates/safetynet/guidance/fieldwork/acop.pdf</p>																		
<p>DEPARTMENT/SECTION THE BARTLETT SCHOOL OF PLANNING LOCATION(S) BUSAN, SOUTH KOREA PERSONS COVERED BY THE RISK ASSESSMENT Dongho Han</p>																		
<p>BRIEF DESCRIPTION OF FIELDWORK The field work will conduct in-depth interview with civil servants, academics, and professionals in the field of architecture and urban planning who have involved in the Centum City project in Busan, South Korea. Most of such fieldwork will occur in Busan.</p>																		
<p>Consider, in turn, each hazard (white on black). If NO hazard exists select NO and move to next hazard section. If a hazard does exist select YES and assess the risks that could arise from that hazard in the risk assessment box. Where risks are identified that are not adequately controlled they must be brought to the attention of your Departmental Management who should put temporary control measures in place or stop the work. Detail such risks in the final section.</p>																		
<p>ENVIRONMENT</p> <p><i>e.g. location, climate, terrain, neighbourhood, in outside organizations, pollution, animals.</i></p>	<p>The environment always represents a safety hazard. Use space below to identify and assess any risks associated with this hazard</p> <p>Examples of risk: adverse weather, illness, hypothermia, assault, getting lost. Is the risk high / medium / low ?</p> <p>Although Ministry of the Interior and Safety announced that Busan has the lowest level of safety grade with regard to environment in 2016, the measuring criteria has focused on natural disaster in summer such as typhoon and a heavy rain within rainy season. This, it doesn't matter in the winter season to undertake my research.</p>																	
<p>CONTROL MEASURES Indicate which procedures are in place to control the identified risk</p> <table border="1"> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>work abroad incorporates Foreign Office advice</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>participants have been trained and given all necessary information</td> </tr> <tr> <td><input type="checkbox"/></td> <td>only accredited centres are used for rural field work</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>participants will wear appropriate clothing and footwear for the specified environment</td> </tr> <tr> <td><input type="checkbox"/></td> <td>trained leaders accompany the trip</td> </tr> <tr> <td><input type="checkbox"/></td> <td>refuge is available</td> </tr> <tr> <td><input type="checkbox"/></td> <td>work in outside organisations is subject to their having satisfactory H&S procedures in place</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>OTHER CONTROL MEASURES: please specify any other control measures you have implemented:</td> </tr> </tbody> </table> <p>I will have a meeting in the buildings which can maintain the safety from the environmental issues.</p>			<input checked="" type="checkbox"/>	work abroad incorporates Foreign Office advice	<input checked="" type="checkbox"/>	participants have been trained and given all necessary information	<input type="checkbox"/>	only accredited centres are used for rural field work	<input checked="" type="checkbox"/>	participants will wear appropriate clothing and footwear for the specified environment	<input type="checkbox"/>	trained leaders accompany the trip	<input type="checkbox"/>	refuge is available	<input type="checkbox"/>	work in outside organisations is subject to their having satisfactory H&S procedures in place	<input checked="" type="checkbox"/>	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:
<input checked="" type="checkbox"/>	work abroad incorporates Foreign Office advice																	
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<input checked="" type="checkbox"/>	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:																	
<p>EMERGENCIES</p> <p><i>e.g. fire, accidents</i></p>	<p>Where emergencies may arise use space below to identify and assess any risks</p> <p>Examples of risk: loss of property, loss of life</p> <p>Since the case study area has become one of the most traffic congestion area in Busan, I must be careful car accident. In order to avoid relevant incidents, I will take a public transport, and be careful when I cross the road.</p>																	
<p>CONTROL MEASURES Indicate which procedures are in place to control the identified risk</p> <table border="1"> <tbody> <tr> <td><input type="checkbox"/></td> <td>participants have registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-abroad/</td> </tr> <tr> <td><input type="checkbox"/></td> <td>fire fighting equipment is carried on the trip and participants know how to use it</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>contact numbers for emergency services are known to all participants</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>participants have means of contacting emergency services</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>participants have been trained and given all necessary information</td> </tr> <tr> <td><input type="checkbox"/></td> <td>a plan for rescue has been formulated, all parties understand the procedure</td> </tr> <tr> <td><input type="checkbox"/></td> <td>the plan for rescue /emergency has a reciprocal element</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>OTHER CONTROL MEASURES: please specify any other control measures you have implemented:</td> </tr> </tbody> </table> <p>When the interview or meeting takes place in a building, I will check emergency exits and the existence of fire fighting equipment.</p>			<input type="checkbox"/>	participants have registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-abroad/	<input type="checkbox"/>	fire fighting equipment is carried on the trip and participants know how to use it	<input checked="" type="checkbox"/>	contact numbers for emergency services are known to all participants	<input checked="" type="checkbox"/>	participants have means of contacting emergency services	<input checked="" type="checkbox"/>	participants have been trained and given all necessary information	<input type="checkbox"/>	a plan for rescue has been formulated, all parties understand the procedure	<input type="checkbox"/>	the plan for rescue /emergency has a reciprocal element	<input checked="" type="checkbox"/>	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:
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<input type="checkbox"/>	the plan for rescue /emergency has a reciprocal element																	
<input checked="" type="checkbox"/>	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:																	

FIELDWORK

1

May 2010

EQUIPMENT	Is equipment used?	No	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
<i>e.g. clothing, outboard motors.</i>			Examples of risk: inappropriate, failure, insufficient training to use or repair, injury. Is the risk high / medium / low ?

CONTROL MEASURES Indicate which procedures are in place to control the identified risk

- ☐ the departmental written Arrangement for equipment is followed
☐ participants have been provided with any necessary equipment appropriate for the work
☐ all equipment has been inspected, before issue, by a competent person
☐ all users have been advised of correct use
☐ special equipment is only issued to persons trained in its use by a competent person
☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

LONE WORKING	Is lone working a possibility?	Yes	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
--------------	--------------------------------	-----	--

e.g. alone or in isolation lone interviews. Examples of risk: difficult to summon help. Is the risk high / medium / low?

Although I will undertake an interview all by my lonesome, there will be a low risks of harm by interviewees. Since the place undertaken interview will be government offices and academic institutions, I believe it will be safe enough.

CONTROL MEASURES Indicate which procedures are in place to control the identified risk

- ☒ the departmental written Arrangement for lone/out of hours working for field work is followed
☐ lone or isolated working is not allowed
☒ location, route and expected time of return of lone workers is logged daily before work commences
☒ all workers have the means of raising an alarm in the event of an emergency, e.g. phone, flare, whistle
☒ all workers are fully familiar with emergency procedures
☒ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

I will work during the daytime with always turing my mobile phone on. Furthermore, I will inform to my family the exact time of interviews for safety.

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ILL HEALTH

e.g. accident, illness, personal attack, special personal considerations or vulnerabilities.

The possibility of ill health always represents a safety hazard. Use space below to identify and assess any risks associated with this Hazard.

Examples of risk: injury, asthma, allergies. Is the risk high / medium / low?

I DO not have any specific considerations or vulnerabilities.

CONTROL MEASURES

Indicate which procedures are in place to control the identified risk

- ☐ an appropriate number of trained first-aiders and first aid kits are present on the field trip
- ☐ all participants have had the necessary inoculations/ carry appropriate prophylactics
- ☐ participants have been advised of the physical demands of the trip and are deemed to be physically suited
- ☐ participants have been adequate advice on harmful plants, animals and substances they may encounter
- ☐ participants who require medication have advised the leader of this and carry sufficient medication for their needs
- ☒ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

I should get dressed tightly in order to catch a bad flu in the winter season.

TRANSPORT

Will transport be required

NO
YES

Move to next hazard

Use space below to identify and assess any risks

e.g. hired vehicles

Examples of risk: accidents arising from lack of maintenance, suitability or training
Is the risk high / medium / low?
Yes

CONTROL MEASURES

Indicate which procedures are in place to control the identified risk

- ☐ only public transport will be used
- ☐ the vehicle will be hired from a reputable supplier
- ☒ transport must be properly maintained in compliance with relevant national regulations
- ☐ drivers comply with UCL Policy on Drivers http://www.ucl.ac.uk/hr/docs/college_drivers.php
- ☒ drivers have been trained and hold the appropriate licence
- ☐ there will be more than one driver to prevent driver/operator fatigue, and there will be adequate rest periods
- ☐ sufficient spare parts carried to meet foreseeable emergencies
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

I will use public transport usually.

DEALING WITH THE PUBLIC

Will people be dealing with public

No

If 'No' move to next hazard

If 'Yes' use space below to identify and assess any risks

e.g. interviews, observing

Examples of risk: personal attack, causing offence, being misinterpreted. Is the risk high / medium / low?

CONTROL MEASURES

Indicate which procedures are in place to control the identified risk

- ☐ all participants are trained in interviewing techniques
- ☐ interviews are contracted out to a third party
- ☐ advice and support from local groups has been sought
- ☐ participants do not wear clothes that might cause offence or attract unwanted attention
- ☐ interviews are conducted at neutral locations or where neither party could be at risk
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

WORKING ON OR NEAR WATER <i>e.g. rivers, marshland, sea.</i>	Will people work on or near water?	No	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
Examples of risk: drowning, malaria, hepatitis A, parasites. Is the risk high / medium / low?			
CONTROL MEASURES Indicate which procedures are in place to control the identified risk			
<input type="checkbox"/> lone working on or near water will not be allowed <input type="checkbox"/> coastguard information is understood; all work takes place outside those times when tides could prove a threat <input type="checkbox"/> all participants are competent swimmers <input type="checkbox"/> participants always wear adequate protective equipment, e.g. buoyancy aids, wellingtons <input type="checkbox"/> boat is operated by a competent person <input type="checkbox"/> all boats are equipped with an alternative means of propulsion e.g. oars <input type="checkbox"/> participants have received any appropriate inoculations <input type="checkbox"/> OTHER CONTROL MEASURES: please specify any other control measures you have implemented:			
MANUAL HANDLING (MH) <i>e.g. lifting, carrying, moving large or heavy equipment, physical unsuitability for the task.</i>	Do MH activities take place?	No	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
Examples of risk: strain, cuts, broken bones. Is the risk high / medium / low?			
CONTROL MEASURES Indicate which procedures are in place to control the identified risk			
<input type="checkbox"/> the departmental written Arrangement for MH is followed <input type="checkbox"/> the supervisor has attended a MH risk assessment course <input type="checkbox"/> all tasks are within reasonable limits, persons physically unsuited to the MH task are prohibited from such activities <input type="checkbox"/> all persons performing MH tasks are adequately trained <input type="checkbox"/> equipment components will be assembled on site <input type="checkbox"/> any MH task outside the competence of staff will be done by contractors <input type="checkbox"/> OTHER CONTROL MEASURES: please specify any other control measures you have implemented:			
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SUBSTANCES	Will participants work with substances	No	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
<i>e.g. plants, chemical, biohazard, waste</i>	Examples of risk: ill health - poisoning, infection, illness, burns, cuts. Is the risk high / medium / low?		
CONTROL MEASURES Indicate which procedures are in place to control the identified risk			
<input type="checkbox"/>	the departmental written Arrangements for dealing with hazardous substances and waste are followed		
<input type="checkbox"/>	all participants are given information, training and protective equipment for hazardous substances they may encounter		
<input type="checkbox"/>	participants who have allergies have advised the leader of this and carry sufficient medication for their needs		
<input type="checkbox"/>	waste is disposed of in a responsible manner		
<input type="checkbox"/>	suitable containers are provided for hazardous waste		
<input type="checkbox"/>	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:		
OTHER HAZARDS	Have you identified any other hazards?	No	If 'No' move to next section If 'Yes' use space below to identify and assess any risks
<i>i.e. any other hazards must be noted and assessed here.</i>	Hazard:		
	Risk: is the risk		
CONTROL MEASURES Give details of control measures in place to control the identified risks			
Have you identified any risks that are not adequately controlled?		NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>	Move to Declaration Use space below to identify the risk and what action was taken
Is this project subject to the UCL requirements on the ethics of Non-NHS Human Research?			Yes
If yes, please state your Project ID Number			12281/001
For more information, please refer to: http://ethics.grad.ucl.ac.uk/			
DECLARATION	The work will be reassessed whenever there is a significant change and at least annually. Those participating in the work have read the assessment.		
Select the appropriate statement:			
<input checked="" type="checkbox"/>	I the undersigned have assessed the activity and associated risks and declare that there is no significant residual risk		
<input type="checkbox"/>	I the undersigned have assessed the activity and associated risks and declare that the risk will be controlled by the method(s) listed above		
NAME OF SUPERVISOR Yvonne Rydin			
SIGNATURE OF SUPERVISOR			DATE

Consent Form for Interviewees

CONSENT FORM FOR [Civil servants/Academics/Officers in private firms] IN RESEARCH STUDIES

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: The evolution of policy mobility embedded in urban regeneration: critical analysis spanning 30 years in Busan, South Korea

Department: The Bartlett School of Planning

Name and Contact Details of the Researcher(s): Dongho Han, [REDACTED]

Name and Contact Details of the Principal Researcher: Yvonne Rydin, [REDACTED]

Name and Contact Details of the UCL Data Protection Officer: N/A

This study has been approved by the UCL Research Ethics Committee: Project ID number: _12281/001_

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

I confirm that I understand that by ticking each box below I am consenting to this element of the study. I understand that it will be assumed that unticked boxes mean that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study.

		Tick Box
1.	<p>*I confirm that I have read and understood the Information Sheet for the above study. I have had an opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction</p> <p><i>[and would like to take part in (please tick one or more of the following)]</i></p> <ul style="list-style-type: none"> - a group discussion - an individual interview 	
2.	*I understand that I will be able to withdraw my data up to 4 weeks after interview	
3.	*I consent to the processing of my personal information (<i>provide information on what personal information specifically will be collected</i>) for the purposes explained to me. I understand that such information will be handled in accordance with all applicable data protection legislation.	
4.	<p>Use of the information for this project only</p> <p>*I understand that confidentiality cannot be guaranteed; due to the limited size of the participant sample.</p> <p>Anonymity is optional for this research. Please select from the following 3 options:</p> <ul style="list-style-type: none"> (a) I agree for my real name and role/affiliation to be used in connection with any words I have said or information I have passed on. (b) I request that my comments are presented anonymously but give permission to connect my role/affiliation with my comments (but not the title of my position). (c) I request that my comments are presented anonymously with no mention of my role/affiliation. 	
5.	*I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit purposes.	

6.	*I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason. I understand that if I decide to withdraw, any personal data I have provided up to that point will be deleted unless I agree otherwise.	
7.	I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the research.	
8.	I understand the larger societal benefits of participating.	
9.	I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher(s) undertaking this study.	
10.	I understand that I will not benefit financially from this study or from any possible outcome it may result in in the future.	
11.	I understand that I will be compensated for the portion of time spent in the study (if applicable) or fully compensated if I choose to withdraw.	
12.	I agree that my pseudonymised research data may be used by others for future research. [No one will be able to identify you when this data is shared.]	
13.	I understand that the information I have submitted will be published as a report and I wish to receive a copy of it. Yes/No	
14.	I consent to my interview being audio/video recorded and understand that the recordings will be: - Stored anonymously, using password-protected software and will be used for training, quality control, audit and specific research purposes. To note: If you do not want your participation recorded you can still take part in the study.	
15.	I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet and explained to me by the researcher.	
16.	I hereby confirm that: (a) I understand the exclusion criteria as detailed in the Information Sheet and explained to me by the researcher; and (b) I do not fall under the exclusion criteria.	
17.	I agree that my GP may be contacted if any unexpected results are found in relation to my health.	
18.	I have informed the researcher of any other research in which I am currently involved or have been involved in during the past 12 months.	
19.	I am aware of who I should contact if I wish to lodge a complaint.	
20.	I voluntarily agree to take part in this study.	
21.	Use of information for this project and beyond I would be happy for the data (audio and transcripts) I provide to be archived at my private data storage. I understand that other authenticated researchers such as my supervisor will have access to my pseudonymised data.	
22.	Overseas Transfer of Data [if applicable] I understand that my personal data will be transferredand the following safeguards will be put in place	

If you would like your contact details to be retained so that you can be contacted in the future by UCL researchers who would like to invite you to participate in follow up studies to this project, or in future studies of a similar nature, please tick the appropriate box below.

<input type="checkbox"/>	Yes, I would be happy to be contacted in this way	
<input type="checkbox"/>	No, I would not like to be contacted	

_____ Name of participant	_____ Date	_____ Signature
Dongho Han		
_____ Researcher	_____ Date	_____ Signature

Participant Information Sheet For [Civil servants/Academics/Officers in private firms]

UCL Research Ethics Committee Approval ID Number: 12281/001

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET**Title of Study:** The evolution of policy mobility embedded in urban regeneration: critical analysis spanning 30 years in Busan, South Korea**Department:** The Bartlett School of Planning**Name and Contact Details of the Researcher(s):** Dongho Han, [REDACTED]**Name and Contact Details of the Principal Researcher:** Yvonne Rydin, [REDACTED]

I confirm that I understand that by ticking each box below I am consenting to this element of the study. I understand that it will be assumed that unticked boxes mean that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study.

1. Invitation Paragraph (Please tick ☐)

You are being invited to take part in a PhD research project in the field of urban planning. Before you decided it is important for you to understand why the research is being done and what voluntary participation will involve. Please take time to read the following information carefully and discuss it. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

2. What is the project's purpose? (Please tick ☐)

The aim of my research is to explore how international policy mobility and local contextual factors affect the development of urban regeneration and how they interact to produce the sustainability of the redevelopment after the regeneration process was completed. In order to conceptualise the above framework on an actual case study, Centum City, one of the most famous urban regeneration project in Busan, South Korea will be explored. This research will be undertaken for 3 years.

3. Why have I been chosen? (Please tick ☐)

You are chosen because you were participated in the Centum City project deeply and managed the project thoroughly through the urban regeneration process. I am keen to listen your experience and knowledge related to the project which will be a good resource to address my aim of the research.

4. Do I have to take part? (Please tick ☐)

Since you are one of a few professionals who was participated in the project, you should take part in my interview voluntarily. It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet and a consent form to keep. You can withdraw at any time without giving a reason and without it affecting any benefits that you are entitled to.

5. What will happen to me if I take part? (Please tick ☐)

You will be involved generally between one and two hours for interview and it could occur again for further analysis during the research. Since the research will be undertaken for 3 year, the additional participation could substitute the Skype.

6. Will I be recorded and how will the recorded media be used? (Please tick ☐)

The audio and/or video recordings of your activities made during this research will be used only for analysis and for illustration in conference presentations and lectures. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings.

7. What are the possible disadvantages and risks of taking part? (Please tick ☐)

- The need for disclosure of information to a third party.
- Unexpected interpretation which makes participants uncomfortable

8. What are the possible benefits of taking part? (Please tick ☐)

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will explore the implementation of Korean-style urban regeneration project and the implications of it on sustainability performance. Since there is insufficient information and materials focusing on such issues (Korean professionals tend to concentrate on visible results rather than invisible process), this research will encourage relevant professionals to have a consideration about urban redevelopment sincerely.

9. What if something goes wrong? (Please tick ☐)

Please contact the following information if something goes wrong.

Principal researcher: Professor Yvonne Rydin, [REDACTED]

Or

The Chair of the UCL Research Ethics Committee: ethics@ucl.ac.uk

10. Limits to confidentiality (Please tick ☐)

- Please note that confidentiality may not be guaranteed; due to the limited size of the participant sample.
- Confidentiality will be respected unless there are compelling and legitimate reasons for this to be breached. If this was the case we would inform you of any decisions that might limit your confidentiality.

11. What will happen to the results of the research project? (Please tick ☐)

Your participation as the data collected during research will be presented within a PhD thesis. You can obtain this through the online UCL library. Also, it should be archived in UCL and might be shared with some researchers for further study.

12. Data Protection Privacy Notice (Please tick ☐)**Notice:**

The data controller for this project will be University College London (UCL). The UCL Data Protection Office provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk. UCL's Data Protection Officer is Lee Shailer and he can also be contacted at data-protection@ucl.ac.uk.

Your personal data will be processed for the purposes outlined in this notice. The legal basis that would be used to process your personal data will be the EU General Data Protection Regulation.

You can provide your consent for the use of your personal data in this project by completing the consent form that has been provided to you.

Your personal data will be processed for 3 years as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, please contact UCL in the first instance at data-protection@ucl.ac.uk. If you remain unsatisfied, you may wish to contact the Information Commissioner's Office (ICO). Contact details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

Detail any intended recipients of personal data if not explained elsewhere, and also advise if any personal data will be transferred outside the EEA, and if so to where.

13. Who is organising and funding the research?

N/A

14. Contact for further information (Please tick ☐)

My permanent contact point is:

Name: Dongho Han

Phone: [REDACTED]

Email: [REDACTED]

Thank you for reading this information sheet and for considering to take part in this research study. If you make a decision to participate in, you will be given a copy of the information sheet and a signed consent form to keep.

Questions to insert into an information sheet if the research project is an overseas clinical trial

Interview Pro Forma

*** INTERVIEW PRO FORMA

Objects of study	Detail questions
Local context	
Political contexts	<ul style="list-style-type: none"> • Devolution has been begun since 1995 in South Korea. To what extent does the devolution have impacted on the redevelopment project?
Economic resources	<ul style="list-style-type: none"> • Korean government has been given an economic support by International Monetary Fund for 4 years since 1997. Did it implicate the implementation of urban regeneration project?
Role of multiple scales of governance	<ul style="list-style-type: none"> • How does mobilising occur through site visits, field trips, and policy tourism?
Role of local politics, history, economy and culture	<ul style="list-style-type: none"> • How do local context get attached to policies to create mobile practice?
Institutional aspects affecting policy mobility	
Moorings, organising nodes or fixed infrastructure for mobility	<ul style="list-style-type: none"> • What mediators and elements interact with the moorings, organising nodes or fixed infrastructure?
Institutional impediments to mobility	<ul style="list-style-type: none"> • What is the major institutional impediments in local context?
The role of policy documentation	<ul style="list-style-type: none"> • To what extent do institutional documents have impact on the mobility process?
Complexity of policy programmes	<ul style="list-style-type: none"> • How the institutional documents are fitted in the complex policy programmes?
Exercise of authority, coercion, inducement, negotiation and persuasion	
Role of knowledge in the transfer of ideas/policies	
How actors draw on circulating knowledge	<ul style="list-style-type: none"> • What knowledge facilitate the circulation of sustainable urban regeneration model?
Role of researchers	<ul style="list-style-type: none"> • What is the role/implication of researchers who can disseminate the knowledge?
Processes of training, education and learning	<ul style="list-style-type: none"> • What sort of phases do the training, education and learning process have?
Best practice as a form of knowledge	<ul style="list-style-type: none"> • What is the other types of knowledge except materials already known?
Key actors	
Global Intelligent Corps	<ul style="list-style-type: none"> • Who were engaged into the mobilisation of urban regeneration process?
Bureaucrats	<ul style="list-style-type: none"> • To what extent does the 3rd sector have impact on the implementation of the regeneration project?
Distinction between kinetic elites and other less mobile groups	<ul style="list-style-type: none"> • How did they mobilise the concept of sustainable development? Was there any specific methods for the diffusion?
Ideology and imaginaries	
Ideological compatibility across space	<ul style="list-style-type: none"> • What is the main aim of the redevelopment project? Does it include environmental sustainability idea entirely or partly?
Imaginaries (pl.) of the ideal city	<ul style="list-style-type: none"> • If there is, what is the materials related to the sustainable development? • What is the detail contents – programmes, legislations, and techniques – within such imaginaries of the ideal city?
Outcomes	
Role of technologies in facilitating and stratifying mobility	<ul style="list-style-type: none"> • What elements within building technologies or sustainable urban planning facilitate policy mobility?
Relationship between mobility and social inclusion	<ul style="list-style-type: none"> • What is the major social inclusion that have impacted on the mobilisation of urban regeneration?
mobilities enable/disable/modify environmental practices	<ul style="list-style-type: none"> • In order to maintain environmental sustainability, does the private firms in the local area have any specific plans in addition to governmental rules?

*** INTERVIEW PRO FORMA

Detail questions	
Objects of study	
Local context	
Political contexts	<ul style="list-style-type: none">1995년 지방자치제도가 본격적으로 시작하면서, 지방정부 주도의 정책이 많이 시행되었습니다. 선행시티 개발 계획을 시행하는 데 지방자치제도의 영향이 어느 정도 작용했을까요? (지역균형 개발 및 지방중소기업 육성에 관한 법률)에 근거해 「부산·경남권 광역개발계획」을 발표)1997년 이후로 약 4년간 대한민국은 IMF 시대를 겪었습니다. 이에 국가운영의 전반적인 부분이 경제적인 제약이 따른 것으로 어느 정도요. 선행시티 개발 계획에서의 영향은 어떤 것들이 있었나요?선행시티 프로젝트를 진행하면서 부산시에서는 오히려 마로 다수의 공무원들을 파견, 정보를 얻은 것으로 알고 있습니다. 이는 오히려 마로의 특별한 행정기관에 있어서 시작이 된 것인지? 아니면 문헌조사를 통해 커이스를 선정, 방문이 이루어진 것인지? 그 과정에 대해 알고 싶습니다.또하여, 한국과 일본은 역사적, 정치적, 경제적, 문화적으로 깊은 관계를 유지하고 있습니다. 이러한 맥락에 미루어 선행시티 프로젝트의 진행 도 한 어느 정도 영향을 받은 것인지, 그리고 직접적 영향은 어떤 것이 있고, 간접적 영향은 어떤 부분이 있었는지 궁금합니다.
Role of local politics, history, economy and culture	
Institutional aspects affecting policy mobility	
Moorings, organising nodes or fixed infrastructure for mobility	<ul style="list-style-type: none">타 프로젝트에서 선행시티 프로젝트에 적용할 만한 제도들은 어떤 것들이 있었는지, 이러한 요소들이 선행시티 프로젝트에 적용되면서 지역이 갖고 있는 특성과는 어떤 관계를 형성했는지, 그래서 어떤 형태로 프로젝트에 영향을 끼쳤는지 궁금합니다.중 다 세부적으로 보면, 선행시티 지역 내에서 프로젝트를 시행했을 때 특별히 문제가 되었던 제도적 혹은 법적인 것이 있었는지? 주로 어떤 부분 - 지방산업단지 지정, 산업단지 및 개발에 관한 법률 등 -에서 직접적으로 영향이 있었는지 궁금합니다.(주) 대우엔지니어링에서 진행 한 수암정 보폭발전지 계획, 수암이 수립될 당시, 그리고 선행시티(수), 기술부에서 교통 및 환경영향 평가가 진행 될 당시에 영향을 끼쳤던 정부정책 (중앙 및 지방)은 어떤 것들이 있으며, 어느 정도 영향을 끼쳤는지요?다양한 형태의 제도가 어떤 방법으로 선행시티 프로젝트에 영향을 끼쳤나요? 예를 들어, 다른 프로젝트를 도모하는 형태로 영향을 끼쳤는지, 지역에 맞도록 변화하여 적용을 시켰는지, 영향을 끼쳤다면 그 성격이 강제적이었는지 혹은 선택적이었는지, 궁금합니다.
Exercise of authority, coercion, inducement, negotiation and persuasion	
Role of knowledge in the transfer of ideas/policies	
How actors draw on circulating knowledge	<ul style="list-style-type: none">선행시티 프로젝트를 진행하면서 범지마경한 정책, 프로그램, 아이디어 등에는 어떤 것들이 있었나요?
Role of researchers	<ul style="list-style-type: none">선행시티 개발대장정을 참고하며, 선행시티 개발계획은 지속가능한 첨단 산업 도시를 지향하고 있습니다. 이런 목표점을 위해 적용된 정책, 프로그램, 아이디어 등에는 어떤 것들이 있을까요?
Processes of training, education and learning	<ul style="list-style-type: none">타 프로젝트들 범지마경하는 데 있어, 관련 학문 종사자 (개 념 및 아이디어 중심)들은 어떤 역할을 했나요? 그들은 프로젝트 진행 전반에 어느 정도 영향을 끼쳤는지 궁금합니다.
Best practice as a form of knowledge	<ul style="list-style-type: none">위에서 언급했듯이 타 프로젝트의 범지마경은 다양한 형태로 변화되어 진행됩니다. 그렇다면, 이러한 형태들은 어떤 매커니즘 (프로세스) - 예를 들어, 교육, 훈련, 합방 등등)을 거쳐 선행시티에 실현되었을까요?위에서 언급된 사항들을 제외하고, policy mobility process 에 영향을 끼쳤던 추가적인 형태들 - 어떤 것이라도 경험을 중심으로 -에는 어떤 것들이 있을까요?

Key actors	
Global Intelligent Corps	• Policy mobility process 에 관련된 Actor 들에는 누가 있을까요? 이들 사이에는 서로에게 어떻게 반응하며, 그 영향은 얼마나 될까요? 나아가 영향력에 따라 프로젝트의 진행이 어떻게 바뀔 수 있었는지 궁금합니다.
Bureaucrats	• 선행시티(주)와 부산시의 구체적인 관계와 업무분담은 어떻게 되었나요? 특히 프로젝트를 진행하면서 그런 역할들이 계속 유지가 되었는지, 변화되었다면 어떤 부분이 변화되었는지 궁금합니다.
Distinction between kinetic elites and other less mobile groups	• 선행시티(주)와 프로젝트 매니저(사실임제)와의 관계는 어떻게 형성되었나요? 이런 관계가 프로젝트를 진행하면서 장점으로 작용한 점은 무엇이며, 단점으로 작용한 점은 또 무엇이었는지? 그래서 그런 중론이 해결이 되었었는지 궁금합니다. (선행시티(주)의 법적 지위 문제)
	• 도시재개발 프로젝트 및 지속가능한 도시재생과 같은 아이디어를 policy mobility process 를 통해 선행시티에 적용할 때, 이 프로젝트에 속한 actor 들 각각의 역할은 무엇이었고 어떻게 유지/회복은 변했으며, 나아가 어떤 관계 (합전) 속에서 policy mobility 프로젝트스가 진행되었고, 또 한 선행시티 프로젝트가 진행 될 수 있었는지 궁금합니다.
Ideology and Imaginaries	
Ideological compatibility across space	• 선행시티 계획은 최소 3 번 정도 수정되었던 것으로 알고 있습니다. 이에 따라 당연히 원래의 목표도 계속해서 변했었을 것으로 예상할 수 있습니다. 그렇다면 최종적인 계획을 바탕으로 한 선행시티 프로젝트의 궁극적인 목표는 무엇이었나요 (추상적으로도 가능)?
Imaginaries (pl.) of the ideal city	• 와와 같은 궁극적인 목표에 지속가능한 도시재개발의 개념은 어떤 식으로 포함되어 있었나요? 만약 추상적으로 재해되었다면, 구체적으로 프로젝트가 진행되면서 어떤 구체적인 형태로 발전이 되었나요?
	• 미나토 마라이 21 이 경우에도 최초 계획에는 신화강의 이수가 구체적인 것으로 포함되어 있지는 않았습니까. 프로젝트를 진행하면서 자연스레 상당부분 적용이 되었다고 파악하고 있습니다. 그렇다면, 선행시티 프로젝트의 경우, policy mobility process 를 거치면서 범죄마량을 하려했던 부분은 없었는지요? 있었다면, 어떤 식으로 적용되었는지 궁금합니다.
Outcomes	
Role of technologies in facilitating and stratifying mobility	• 지금까지 일련의 질문들이 policy mobility 과정 혹은 도시재생(도시재개발) 프로젝트 진행과정에 관한 것이라라고 한다면, 지금부터 그 결과에 대한 질문을 하려고 합니다.
Relationship between mobility and social inclusion	• 지속가능한 도시재개발을 목표로 진행된 프로젝트의 결과물에는 어떤 것들이 있습니까? 예를 들어 건축물 혹은 도시기반 시설에 적용된 친환경 요소들에는 어떤 부분이 있습니까? 이런 부분들을 제대로 평가하기 위해서는 어떤 정보를 이용할 수 있는지도 궁금합니다 (예를 들어, 건축도시 혹은 도시계획(도시 등))
	• 지속가능한 도시를 형성하기 위해 사회참여는 어떤 식으로 이루어졌고, 그 결과 프로젝트에 어떤 결과를 이끌어 냈는지 궁금합니다. 예를 들어 소라기 재철용 선타의 경우에는 선행시티 프로젝트에 포함되었다가 나중에 제외되었는데 이런 결과에 사회참여가 어떤 영향을 미쳤는지요?
mobilities enable/disable/modify environmental practices	• 환경적 지속가능성을 유지하기 위해, 프로젝트 매니저 및 actor 들은 각자 구체적인 어떤 형태의 결과물을 만들어냈나요? 이러한 결과물들이 실제 프로젝트의 결과물로 반영이 되었는지, 시도되었다가 결과가 미비해서 퇴색되었는지 궁금합니다.
	• 환경적 지속가능성을 얻을 때 빼놓을 수 없는 부분이 energy performance 와 관련된 부분입니다. 하지만, 우리나라의 경우 에너지와 관련한 구체적인 정보에 접근하기 쉽지 않습니다. 프로젝트의 결과물에서 이러한 부분에 대해 설명할 수 있는 요소들에는 어떤 것들이 있으며, 구체적인 것으로 높이 보이는 결과물은 무엇이었나요? (설명할 수 있는 요소들과 결과물 사이의 관계를 규명하기 위한 전문가의 소견도 함 질문 대상)