

Local spatial-economic impacts of sustainable urban regeneration

A case study about the Cheonggyecheon Restoration Project

Bernhard Jacco Kuper
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Master Economic Geography
Faculty of Spatial Sciences
University of Groningen
Korea University

Supervisor University of Groningen: Prof. Drs. Paul van Steen
Second Supervisor University of Groningen: Dr. Sierdjan Koster
Supervisor Korea University: Prof. Dr. Jun Koo



Abstract

The world population keeps on growing and the human impact on the natural environment increases. Since 2008, more than half of the world population lives in cities and this number will only increase for the next decades. In order to accommodate the growing number of people and to reduce the impact of individuals on the natural environment it is crucial to develop regions and cities in a sustainable way. At the start of the 21st century, South Korean's politicians and academics realized that this is also the case in South Korea and in particular in the capital city, Seoul. In 2003, the city of Seoul announced a radical 'paradigm shift' in urban planning from economic progress towards sustainable development. Restoring the local ecology in cities is likely to have a positive effect on the local ecosystem and reduces local pollution. However, improving the local ecology or justifying sustainable regeneration projects seems to be hard in the face of other urban problems such as unemployment, economic decline or social injustice. In order to create and implement sustainable regeneration projects, it seems to be very relevant that projects also generate spatial-economic benefits for the local stakeholders. But what are the possible effects of urban regeneration projects on the spatial and economic environment? National or local governments can play a leading role by integrating sustainable regeneration projects into urban policies. What are the roles of governments and other stakeholders in these projects? And does the image of the area or city change because of a certain project? This thesis attempts to analyze the spatial and economic impact of the Cheonggyecheon Restoration Project on Seoul's Central Business District and the area's image. First, a stakeholder analysis was conducted in order to determine the roles of the stakeholders and their influences on the outcomes of the project. Secondly, spatial and economic characteristics and the image of the Central Business District prior to the Cheonggyecheon restoration were analyzed by using secondary literature. After that, primary data gained from interviews and a survey was used in order to map the area's characteristics and to determine the impact of the project.

What are the main findings? First, the different roles and influences of the stakeholders can be seen in the final outcome of the project. The Cheonggyecheon restoration project was the first public project in Korea that actively sought citizens' participation via an established Citizens' Committee. However, it remains doubtful whether the participation of certain stakeholders really affected the final outcome of the project. The political system in South Korea is young and hierarchical. In Seoul, the mayor very often has the final say in certain policies or projects, and this was the case regarding the Cheonggyecheon project. Seoul's mayor, Lee Myung-bak, was especially concerned with the project. He used the Cheonggyecheon restoration as his main campaign subject for the mayoral elections. Besides the mayor, the Project Headquarter and related government institutions were key stakeholders in the project. Political pressure and high ambitions of the mayor contributed to the rapid restoration of the stream. Within 27 months, the 5.8 kilometer Cheonggye Expressway was deconstructed and the Cheonggyecheon stream was restored. The project was characterized as a comprehensive and integrated public project and local citizens were involved in it. However, the determination of the more powerful stakeholders dominated the influences of the less powerful ones on the project like local merchants. Some smaller stakeholders now say they are negatively affected by the project.

Before the Cheonggyecheon restoration itself, Seoul's Central Business District was characterized by congestion, pollution, depopulation and a decline in business opportunities. In order to revive the

city center, candidate mayor Lee Myung-bak suggested restoring the ancient Cheonggyecheon stream that was covered by an expressway for more than forty years. Social and economic benefits would soon follow as the environmental quality would improve. From a spatial and economical perspective, the Cheonggyecheon project definitely revived Seoul's Central Business District. The restoration of the local ecology led to some beneficial effects for the local environment and increased the attractiveness of the area. The number of roads in the area was reduced while at the same time the access by public transport was improved. Bus-only lanes and a new traffic management system were introduced to make public transport more efficient. During the restoration, historical aspects, such as bridges and old relics from the Joseon area, were restored which increased the attractiveness of the area. The local ecology and historical quality attracts thousands of tourists daily. As a result, a shift in the spatial business pattern of the area took place and more businesses such as restaurants try to benefit from the increased number of tourists. The majority of businesses in the area now experience higher profits than before the restoration. This is especially the case during festivals that are organized at Cheonggye plaza adjacent to the stream. Because of the project, real-estate values in the whole area increased. However, whether this influenced the research area in a positive or negative way is unclear. Several local merchants claim that they lost customers, pay higher rents and experience a fall in profits. If this is the result of the Cheonggyecheon project or their role in the outcome of it seems to be doubtful. These businesses were already gradually getting obsolete before the actual restoration of the Cheonggyecheon.

At this moment, the image of the research area can be characterized as relatively sustainable and green, touristic and competitive. Because of the location of the area in the heart of Seoul, not only the image of the area but also the 'face of Seoul' changed. Even though some stakeholders might feel that their voices and opinions were unheard, the Cheonggyecheon project proved that when the local environment can be revived in an ecological and sustainable way, spatial and economic benefits can follow. The measured effects of the Cheonggyecheon regeneration project are very unique and cannot be generalized. However, generating positive spatial and economic effects can and did create a platform for further sustainable urban regeneration projects in South Korea. Moreover, urban regeneration projects can be used as marketing tools that positively change the image of a city. In order to maintain or strengthen this image and to enjoy the benefits of the project, it is necessary to monitor the effects of the project and integrate it into broader urban regeneration policies.

Key Words:

Urban Regeneration – Spatial – Economic – Image – Sustainable Development – City Marketing - Flagship Projects – Urban Parks – Cheonggyecheon Restoration Project – Seoul – South Korea

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1. Introduction

This first chapter of the thesis describes the motivation to conduct this research. The chapter tries to create a selling point, discussing why it is interesting to analyze the spatial and economic impacts of urban regeneration projects, in particular of the Cheonggyecheon restoration project. After that, the problem definition, research objectives, research questions and the research area will be described. Finally, research methods and the organization of the thesis will be explained.

1.1. Motivation of the research

Changing an urban environment can be a difficult and long-term challenge. Including sustainability into this process makes this even more complex. It is likely that different stakeholders and parties want to have their say in this process that is often named 'urban regeneration'. Finding a balance between the economical, physical, ecological, and social aspects is the main challenge for those involved in urban regeneration projects (Roberts and Sykes, 2000). At the start of the 21st century, a shift is clearly visible in the way in which governments, planners and private companies around the world deal with urban projects. More attention is paid to the sustainable and ecological aspects of the urban environment. Actors in urban regeneration projects gained the insight, that implementing projects that include an ecological or sustainable perspective may have an impact on the economic, spatial and social aspects of the local environment as well. Furthermore, urban regeneration might be used as a marketing tool to change the image of a city or area by improving the local environment. This thesis tries to analyze the impact of such an urban regeneration project from both a spatial-economic and a marketing perspective. The thesis focuses on one urban regeneration project in particular: the Cheonggyecheon restoration project. The project is located in downtown Seoul, South Korea. In order to give Seoul's Central Business District a facelift, a nearby obsolete expressway was removed in 2003. In less than two and a half years, on the site of this expressway, a long linear park and an old 5.8 kilometer stream were restored. The aim of the Seoul Metropolitan Government was to revitalize the Seoul city center, to reduce the local traffic and deal with dangerous traffic situations. Besides that the local environmental quality and ecology had to be restored, in order for people to enjoy the local nature and to 'bring people closer to the city' (Lee, 2012).

So, the goal of this research is to analyze the spatial and economic impacts of the Cheonggyecheon restoration project on Seoul's Central Business District and its image. During the restoration, one of the main objectives of the Seoul Metropolitan Government was the redevelopment of Seoul's CBD. It is interesting to find out in which ways the local stakeholders that are related to the project are affected in both spatial and economical terms by the presence of the stream. Besides that, it is important to find out which stakeholders influenced the final outcome of the project or did benefit from the project. It can be argued that the Cheonggyecheon project can be identified as a 'flagship-project' to gain international recognition for the sustainable and green urban redevelopment projects that are taking place in Korea. Especially since the country is ranked as one of the most CO₂ polluting countries in the world (United Nations, 2012). For this reason, this thesis also investigates whether the Cheonggyecheon project contributes to the marketing and the image of the local environment. It is important to find out whether certain urban regeneration projects can change the ways in which people think about the city they live in and the quality of their local environment, which can affect the spatial-economic environment as well.

1.2. Problem definition

After the Korean War (1950-1953), rapid industrialization permanently changed the way in which the city of Seoul was spatially organized. At the Cheonggyecheon stream, located in the heart of Seoul, refugee housing was built along its banks. The quality of the environment surrounding the stream deteriorated and the Seoul Metropolitan Government decided to cover the stream with an elevated expressway. In the 1970's Korea's economic growth was recognized worldwide and South Korea was named one of the four Asian Tigers (Kim and Han, 2010). The rapid industrialization of South Korea and Seoul in particular had a big impact on their image. In 2003 the same Cheonggye Expressway near downtown Seoul was transformed back into a linear urban park. The transformation took place in order to regenerate Seoul's CBD and to change the city's image into a more sustainable urban landscape (Kang and Cervero, 2008). The restoration of the Cheonggyecheon stream might be defined as a form of city marketing. Changing the image of a city in the minds of the target population can be seen as an important goal of a city marketing process. Changing the image of the city in both physical and psychological ways is likely to have a significant impact on the local environment. It is interesting to find out which stakeholders enjoy the benefits of the project and in which ways it influenced the spatial-economic environment, as well as the image of the area.

1.3. Research objective

The research objective of the thesis is to analyze the contribution of the restoration of the Cheonggyecheon stream to the local economy, the spatial structure and to the image of the research area located in Seoul's CBD. This is important because the research validates the goals of the Seoul Metropolitan Government and might affect future projects related to sustainable urban regeneration.

1.4. Research questions

In order to achieve the objectives of this research, the following research questions were formulated:

"In which ways does the Cheonggyecheon regeneration project contribute to the spatial and economic structure of the local environment and its image?"

The main questions can be broken up into several sub questions. By doing so, the size of the research is reduced. This makes the research more practical. The three sub questions are the following:

- 1. Who are the most important stakeholders and how are they related to the Cheonggyecheon regeneration project? Which stakeholders benefit the most?*
- 2. What are the spatial and economic impacts of the Cheonggyecheon regeneration project on the local environment?*
- 3. Does the Cheonggyecheon restoration project contribute to the image of the local environment?*

1.5. Research area

In order to limit the size of this research not the whole area adjacent to the Cheonggyecheon stream, which is 5.8 kilometers in length, was investigated. The research area stretches from the origin of the stream at Cheonggye Plaza up until the Gwansugyo Bridge at about 1.4 kilometers from the origin. The research was conducted within a buffer ranging between minimum 30 and maximum 200 meters away from the stream (see map 1.1.). Seoul's CBD is located south-west of the research area and stretches all the way to Cheonggye Plaza in the research area. Inside the green line the research took place. The red line marks Cheonggye Plaza from where the Cheonggyecheon flows downstream.

Map 1.1. The research area



Source: Based on Google Maps (2012)

1.6. Research methods and organization of this research

In the next chapter, theories related to urban regeneration, city marketing and the impacts of urban green spaces will be explored. This provides a context in which the Cheonggyecheon project can be analyzed and the local spatial-economic impact can be determined. Subsequently, the methodological framework will be discussed. More detailed information about the project and the research area will be discussed in the project description in chapter four before the research results will be presented and analyzed in chapter five. Interviews with six key stakeholders in the Cheonggyecheon urban regeneration process and 61 surveys among local shopkeepers and inhabitants were held to determine the spatial-economic impact of the project and the image of the research area. The impact of the Cheonggyecheon project will be determined by comparing the local spatial-economic situation prior to restoration, described in the project description, with the findings from the SWOT analysis in chapter 5. After that, conclusions will be drawn in relation to the findings from the theoretical framework. Finally, suggestions for further research and reflections about the thesis will be discussed.

2. Theoretical Framework

This theoretical framework offers a context, in which urban regeneration, the use of an area as a marketing tool, and the impact of urban green spaces can form the underlying conditions for any unique sustainable urban regeneration project.

2.1. Introduction

A transition towards more sustainable cities is necessary in order to cope with the increasing impact of individuals on the natural environment. Urban regeneration projects can be a tool to restore the local ecology of cities and alleviate negative effects of the increasing pressure on the environment, especially when local spatial-economic effects can be linked with ecological success. Before the thesis moves on towards the analysis of spatial-economic impact of the Cheonggyecheon project on its local environment and image, it is important to understand principles of urban regeneration, the use of city marketing strategies to change a city's image, and the effects of urban green spaces on the local environment. First, academic literature may provide insights in the ways in which urban regeneration projects and the involved stakeholders influence the local environment.

2.2. Urban regeneration

According to Manadipour (2010), urban regeneration projects aim to improve the local environment. Comprehensive policies are often required in order to generate benefits for all the stakeholders involved. Urban regeneration projects are characterized as very complex and dynamic. These projects face greater uncertainty and are much more complex than other urban projects such as urban expansion projects (Yu and Kwon, 2011). Regeneration policies have to lead to actions that actually improve the local area that was first subject to decline. Roberts and Sykes (2000) define 'urban regeneration' 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 and Sykes, 2000 p. 17).

Table 2.1. An overview of urban regeneration through time

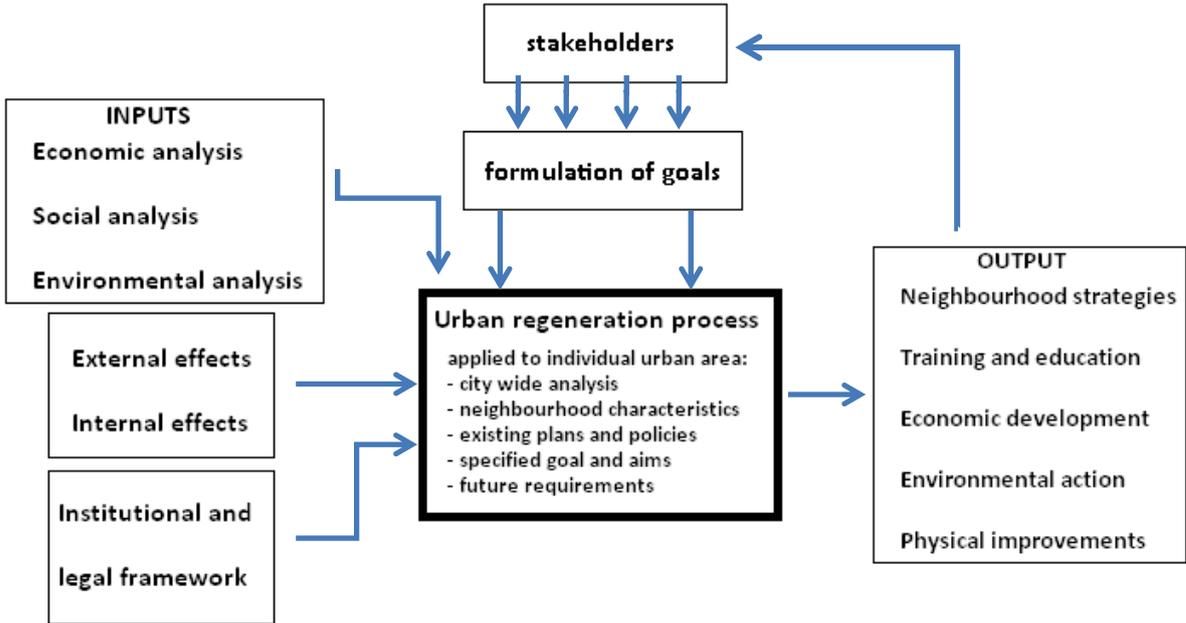
Urban reconstruction (1950's) Key words:	The reconstruction of parts of a town. Based on a master plan. Government-led. Slum clearance and high rise housing.
Urban revitalization (1960's) Key words:	Rehabilitation of existing areas. Extension of suburban growth. Introduction of private sector and social objectives.
Urban renewal (1970's) Key words:	<i>In situ</i> development. Plans on neighborhood scale. Development of older city areas. Still development in periphery.
Urban redevelopment (1980's) Key words:	Flagship projects. Social objectives. Major redevelopment schemes. Dominated by private sector and special agencies.
Urban regeneration (1990's) Key words:	Introduction of strategic integrated partnerships. Comprehensive policies and practices. Introduction of sustainable development.

Source: based on Roberts and Sykes (2000)

Ideas and principles of urban regeneration changed over time (see table 2.1). Before the 1950's it was called 'urban reconstruction' and focused primarily on slum clearance. From the 1980's onwards the private sector got more involved. Urban regeneration changed the social structure of cities. Social objectives such as neighborhood satisfaction were included in urban regeneration policies (Chan and Lee, 2007).

In the 1990's another shift in urban regeneration projects took place. In order to improve the overall well-being of all the stakeholders involved in urban regeneration projects, strategic public-private partnerships were formed. Single-stakeholder projects faced limitations. The strategic approach revealed the intentions and goals of the stakeholders and presented the consequences of projects for each stakeholder. It also encouraged co-ordination and integration of both policies and resources between public institutions, private organizations and the local community. According to Geddes (1997), policies often make use of local characteristics and respond to the needs of different stakeholders involved in the regeneration process. However, urban regeneration projects that consist of strategic partnerships are often also long-term projects which can influence stakeholders in both a positive and a negative way (Carter, 2000; Roberts and Sykes, 2000).

Figure 2.1. The urban regeneration process



Source: based on "The Urban Regeneration process" by Roberts and Sykes (2000)

In order for a government to cooperate with relevant stakeholders, local problems, the context, policies and the institutional and legal framework have to be understood first. This makes each urban regeneration project unique (Roberts and Sykes, 2000). External effects, such as macroeconomic changes, or internal effects, like existing policies and local preferences, also affect the urban regeneration process. Finally, urban regeneration policies are constructed that aim to create lasting improvements for the local environment for all stakeholders. Figure 2.1. illustrates the complexity of the urban regeneration process. The figure shows that the output of the process affects the stakeholders in different ways. Because of this complexity, the majority of the urban regeneration projects are long-term processes that generate policies and create lasting improvements to the local

area for all stakeholders involved (Home, 1982). After completion of the project, constant monitoring of local effects is necessary in order to create or maintain the desired effects (Roberts and Sykes, 2000).

Sustainable urban regeneration

Table 2.1. illustrates that since the start of the 1990's the concept of sustainability in urban regeneration projects became more influential. The most common used definition of the sustainability concept was presented in the Brundtland Report of 1987. In the report, sustainable development is defined as follows: *"meeting the needs of the present without compromising the ability of future generations to meet their own needs"*. The report underlines consequences of the overexploitation of natural resources by 'the North' and the failure to meet the basic needs of people in the Southern Hemisphere. Since the Brundtland Report and following climate conferences like the Rio conference in 1992, more urban regeneration projects adopted ideas about environmental awareness and sustainable development gradually. The need of cities to transform into more sustainable environments became clearer. This is especially the case, because of increasing local pollution and waste in cities and the consumption of resources from elsewhere (Sorensen and Okata, 2011). However, in each city, the different stakeholders understand and prioritize the need for urban sustainability in different ways. According to Haughton and Hunter (1996), creating a sustainable city is more than creating anti-pollution measures and conserving green areas. Urban environmental policies have to be linked to social and economic policies and urban regeneration projects can be a tool to do so. Sustainable urban environments should support the local economies but yet do so with lower levels of local consumption and the use of fewer resources. It may be clear that green spaces like urban streams, ecological zones or urban parks can have positive effects on the local ecology. However, it might be difficult to prioritize environmental problems and issues when local inhabitants may face urban deterioration, local unemployment, poverty, poor housing or other urban challenges.

Urban regeneration in South Korea

In each city across the world, local governments deal differently with urban regeneration and sustainable development. Urban regeneration projects in South Korea started in the 1960's and focused on rapid economic growth and urbanization (Lee, 2000). The population of Seoul grew from 2 million to more than 10 million between 1960 and 1990. As a consequence the environmental quality deteriorated. In order to cope with the population growth, urban regeneration projects were government-led and involved the construction of infrastructure or apartment blocks while squatter buildings were cleared. In the 1970's, civil organizations started to demand urban governance in order to tackle social issues such as bad housing quality. Korean urban regeneration became more comprehensive as local governments, squatters, tenants, land developers and speculators were gradually included in the process. On the other hand, the Urban Renewal Law created a special role for mayors in shaping and implementing new urban regeneration policies (Lee, 2000). The state continued to dominate Korean urban regeneration projects, by removing squatter houses and shanty areas while private organizations were responsible for building apartments or other buildings. Besides that more investments in Seoul's' infrastructure were necessary in order to cope with the economic development and growth of car users. More than in Europe or the US, the Korean government led the infrastructure and housing projects (Lee, 2000).

According to Yu and Kwon (2011), urban regeneration in South Korea exists of the following phases. First, a general urban regeneration master plan has to be developed at both neighborhood and municipal level. When the master plan is approved, a project promoter will be chosen. Next, an urban regeneration implementation plan is set up. In South Korea, the local urban regeneration plan needs to match with national urban regeneration plans and their goals. Financial resources have to be allocated and construction programs are planned. Construction companies often bid for the construction. Finally, the project itself has to be implemented. This can include residents' relocation, demolition and the construction of buildings, infrastructure or public spaces. After completion, regular management and monitoring institutes analyze the effects of the project. Yu and Kwon (2010) argue that the prevention of potential conflicts between stakeholders in Korea concerning the plans is crucial. More managerial efforts should be put into these earlier phases of the urban regeneration process in order to turn the project into a success.

2.3. City marketing and urban regeneration

Urban regeneration projects can also be used as a marketing tool in order to change the image and environmental quality of a city. In order to determine the impacts of the Cheonggyecheon restoration project on the image of Seoul's Central Business district, academic literature about city marketing will be analyzed.

In order to promote a city to a target population and create lasting improvements, the local environment has to match with the needs and demands of its users (Ashworth and Voogd, 1987). Like with urban regeneration, the goal of city marketing is to create incentives for both social and economic activities in the specific area. City marketing can attempt to attract new city users via 'cold city marketing' strategies. However, matching the area with its current users via 'warm city marketing' strategies has proved to be more effective (Hospers, 2011).

'City marketing is a long-term process and or an instrument used in policies existing of related activities that are aimed at attracting or conserving a certain target population for a city' (Hospers et al., 2011).

So, marketing places does not imply that the local environment has to be adjusted in order to match the needs of certain users. There are several types of policies that planners can use to match the local environment with the needs of the users such as promotional, spatial, organizational or financial measures. Ashworth and Voogd (1987) distinguished strategies that policymakers can use in order to match the users' needs with the city's qualities: *consolidation policies, qualitative policies, expansion policies or diversification policies*. The first two policies focus on the current users of a city. Consolidation policies do not aim to change the local environment while qualitative policies attempt to improve the environment in favor of their users. If policymakers choose for an expansion policy, a new target population should match with the current local environment. Diversification policies try to match new users with a changed local environment (see table 2.2.). Once the marketing strategies and users are chosen, geographical marketing policy can be implemented.

Table 2.2. Typology of geographical marketing strategies

	Urban site / project	
Market	No changes	Changes
Current users	<i>Consolidation policy</i>	<i>Qualitative policy</i>
New users	<i>Expansion policy</i>	<i>Diversification policy</i>

Source: based on Ashworth and Voogd (1987)

Flagship projects can also be used as a marketing tool to generate local development (Smyth, 1994). A flagship project is often a development in its own right and a statement of urban planners or politicians (Ashworth, 2011). Flagship projects are often tall buildings or characterized by their remarkable designs. Examples of flagship projects are the Guggenheim museum in Bilbao or the Petronas Towers (452 meters) in Kuala Lumpur (see figure 2.2). Besides the flagship project itself, the name of an architect can also influence the image of a city. Hospers (2011) underlines the importance of flagship projects as ‘urban image carriers’. These projects are likely to be photographed by tourists. As a result, they are spread fast, free and efficient via the internet or social media and are likely to promote the city and define its image. When flagship projects create positive economic, social, ecological or cultural opportunities and increase the well-being of the target group, they can be considered as a success. However, there is also the risk that the local environment does not benefit from the project. Finally, it is important that flagship projects are integrated in broader policies (Smyth, 1994; Anholt, 2008). They should be part of long-term strategies and should not consist of merely symbolic actions. Monitoring and managing the local effects are crucial in order to positively influence the local environment

Figure 2.2.
PETRONAS Towers



Source: Flickr (2012)

2.4. The impact of urban green spaces

Both city marketing and urban regeneration projects aim to create long-term benefits for a certain area and its users. This section of the theoretical framework analyzes academic literature about the possible effects of urban green spaces or parks on the local environment. In order to validate the creation of green spaces, it is interesting to find out what the local spatial-economic effects of green spaces can be, besides the ecological effects. Furthermore, the specific effects of linear urban parks will be examined.

In discussing urban green spaces’ impact, apart from an ecological perspective, various perspectives can be distinguished.

- **A social and psychological perspective**

According to Clark (2006), urban green spaces are vital and dynamic parts of a city. Green spaces can be social places where people interact. They can strengthen social cohesion between neighborhoods and consequently emphasize a higher quality of life. However, during night time they can be unsafe. Green spaces, such as urban parks, can act as ‘breathing spaces’ in densely populated or polluted cities. Green spaces in cities also encourage people to live healthier lives,

grow their own food or increase their environmental awareness. They offer individuals the possibility to walk or use a bicycle. From a psychological perspective, parks can reduce stress and provide a sense of happiness, peacefulness or freedom (Chiesura, 2003).

- **A physical perspective**

Green spaces in cities can improve the aesthetical quality of the local area (Haughton and Hunter, 1996). Green spaces can attract visitors that want to enjoy local nature, culture, history, public sculptures and arts. These places can be a safe haven in a complex urban landscape.

- **An economic perspective**

The creation of urban green spaces can increase the economic attractiveness of areas. People and investors are attracted to visit, live or work in the area because of the local natural amenities. According to the American Planning Association (2002), affluent retirees, knowledge workers and talented people are especially attracted to these areas. The availability of a nearby park might increase the property value of local housing or the quality of the buildings (Haughton and Hunter, 1996). Because of the higher amenities in the urban areas located closer to green spaces at the edges of cities, people are likely to pay higher rents to live near these places (McCann, 2001). Homebuyers also prefer to buy homes close to parks or open spaces. Consequently, high-income groups are more likely to live at the edges of the cities in order to benefit from the rural amenities. Once a green space, such as a local park is provided, the value of adjacent property is expected to increase (Salazar and Menéndez, 2005; Cervero, 2009). The increase in property value can even lead to an increase in municipal tax revenues via property tax revenues (American Planning Association, 2002). Increased tourist and retail-related expenditures can also increase the municipal tax revenues. Moreover, in some cases residents that live in proximity of a park are willing to pay to make use of it (Salazar and Menéndez, 2005). The impacts of public or green space improvements in city centers can also be revealed in the property value and in local business profits. When the economic conditions improve, property values might increase because of an increased competitiveness (Madanipour, 2010).

The effects of linear public parks

According to Marcus and Francis (1998), linear parks are likely to have specific characteristics and effects on the local environment and its image. First of all, these parks are often located along former expressways, creeks or railroads and can form a border between different neighborhoods within a city. Urban projects like the construction of new subway lines or the deconstruction of railroads or expressways can provide land for linear parks. Because of this, linear parks appear more and more in cities. Linear parks encourage health related activities such as jogging even more than non-linear parks because of its shape. The movement through a linear park also encourages social mixing between users from different neighborhoods and backgrounds. However, this might result in functional conflicts between users like pedestrians or bicyclists. Streets that cross the parks also interrupt the flows of the users within the park. Another disadvantage is that the proximity of traffic, housing or businesses can frustrate the users that are taking rest and or enjoy the nature. Interestingly, Marcus and Francis (1998) also mention that linear urban parks may stimulate the restoration of urban creeks and local drainage systems. It is essential to develop infrastructure to manage and monitor linear public or green spaces in order to maintain a positive image and prevent conflicts between stakeholders (Madanipour, 2010).

2.5. Theoretical statements

In order to make cities more sustainable and to reduce the impact of individuals, urban regeneration policies and city marketing strategies can be used to promote the use of urban green spaces. However, it seems to be crucial to generate long-term economic and spatial benefits as well in order to validate these projects or strategies. In this theoretical framework, it became clear that urban regeneration policies, city marketing strategies and urban green spaces seem to be interrelated and aim to positively change the local environment. A number of trends became clear in this theoretical framework. These trends are presented in statements below. By comparing the impact of the Cheonggyecheon restoration project on the local environment to these statements, the uniqueness of the project can be discussed.

- Urban regeneration is a complicated and a long-term process that aims to improve the local environment. In order to find solutions for urban problems, comprehensive and integrated visions and actions are needed.
- In Korea, governments play a key role in urban regeneration policies which are often state-led. However, more and more stakeholders are getting involved in urban regeneration policies in order to avoid conflicts between stakeholders and to turn projects into a success.
- Urban regeneration projects, like flagship projects, should not stand alone or only consist of symbolic actions. They should be integrated into long-term broad regional, national or even international policies in order to make them successful.
- It is difficult to prioritize environmental problems when cities face many other economic or social problems. However, in general, urban green spaces can positively affect the local environment in an ecological, social, psychological and economical way.
- Urban regeneration projects can be used in order to tackle the environmental challenges that cities face in the twenty-first century by trying to create a more sustainable environment.
- City marketing and urban regeneration policies are intertwined. Both policies aim to change the urban landscape by creating long-term benefits for the users of the city. Urban regeneration policies can be used as a city marketing tool to define a city's image.

3. Methodological Framework

This chapter explains the directions and justifies the choices made in this thesis in order to map the spatial-economic effects of the Cheonggyecheon project on Seoul's Central Business District, as well as its image.

3.1. Introduction

The previous chapters explained why it is important to find out in which ways certain urban regeneration projects like the Cheonggyecheon project, do influence the local environment. The findings in this thesis can give an indication of effects that might happen at similar projects. This thesis is based primarily on information acquired from interviews and a survey, so it can be characterized as a 'descriptive analysis'. The measured effects and impacts are only valid for the Cheonggyecheon project and its local environment and conclusions can only be drawn about the impact of the project on the research area. So, even though both qualitative and quantitative data were collected, only indications of possible effects can be identified for other urban regeneration projects or in other cities or countries.

3.2. Validation of the research methods

In order to determine the 'impact' of a certain urban regeneration project, analyzing the current spatial-economic situation is not sufficient. The context has to be described and discussed before this research can move on towards the actual data collection. In the theoretical framework, secondary data relates this research to the context of urban regeneration projects, city marketing and the impact of urban green spaces. However an extra chapter, the project description, has been added to this research to describe the economic and spatial situation of Seoul's Central Business District, prior to the Cheonggyecheon restoration in 2003. Secondary literature was used to describe this image through time. Besides that, historical, ecological and social features are also included in the project description since they influenced the way in which the Cheonggyecheon stream was restored. Also, the role of the relevant stakeholders that were involved in the project had to be examined. Especially since each stakeholder has their own influence on the outcome of the project. This consequently affects the image as well as the spatial and economic characteristics of the area.

Secondary data was used in the project description because it is easy to access. Statistics about the research area were difficult to find since most of the academic literature, government reports and policies about the project are written in Korean. A disadvantage of the secondary literature is that it can be biased. Besides that, secondary literature can be written at a different places or time. This can lead to difficulties when making comparisons between the data (Flowerdew and Martin, 2005).

Primary data, the data collected by the researcher itself, was used to actually measure the spatial and economic impact and the image of the Cheonggyecheon project on the area (Flowerdew and Martin, 2005). Furthermore, a SWOT analysis was conducted in order to map the research area's current strengths, weaknesses, opportunities and threats. Consequently, the current characteristics of the research area were compared with the characteristics of the area prior to the Cheonggyecheon restoration in 2003.

3.3. Collecting data and ethical issues

In order to map the spatial-economic characteristics as well as the image of the research area, two sorts of primary data were collected.

Interviews

Interviews were the main primary data sources that were used. In total, six key stakeholders involved in the decision-making process of the Cheonggyecheon project were interviewed. Appendix I includes the names of the interviewees and their relation to the project. The interviewees were asked about their opinion on certain relevant topics such as the role of various stakeholders and the impacts of these stakeholders on the outcome of the project. It is important to understand the personal experiences of the stakeholders about the project and its impact. The opinions of the interviewees should not be seen as facts but as subjective opinions. By comparing these opinions of the stakeholders with the findings from the survey, conclusions were drawn. Asking for permission to record the interview and the actual recording itself minimized the risk of information loss. Besides that, the interviews were often held at the offices of the interviewees in order to reduce the background noise and make the interviewee feel at comfort. The interviews started with simple questions, to let the interviewer and interviewee get used to each other, before asking detailed questions. Interview questions were semi-structured in order to create a natural conversation and to ask questions that arose during the interview. After each interview, advice was asked about finding other possible interviewees. Finding new relevant interviewees or stakeholders via the interviewee is called 'snowballing' (Flowerdew and Martin, 2005). This method turned out to be very successful. Non-English speaking interviewees were recruited via Professor Koo from Korea University. His vast network of contacts with government officials helped to find two other stakeholders involved in the Cheonggyecheon project. The interviews were transcribed by or translated by a Korean.

In general, the level of English among the Korean population is poor. Fortunately, at Korean universities the level of English is much better and four of the six interviewees spent a period of their lives in the United States. However in order to overcome the language barrier, a translator from Korea University joined twice. Another problem during the research was the Korean social hierarchy system. Expectations about the possibilities to find the key interviewees had to be restrained since for normal Korean citizens it is extremely rare to meet high-ranking government officials. Also, critical interview questions had to be treated with care, especially about controversial topics. Interviewees might feel uncomfortable answering those questions or not answer at all.

Overall, the interviews contributed to both the description of the research area as well as making comparisons between the research area before and after the restoration. All the interviewees were intensively involved in the project and often confirmed findings from surveys or related certain 'impacts' mentioned in the theory to the case of the Cheonggyecheon restoration project. Again, interviewees were the main data source for analyzing the role of the stakeholders that were involved in the project. Determining the role and influence of each stakeholder was necessary to understand the spatial, economical outcomes and effects of the project on the research area and its image.

Surveys

Surveys were held in order to map the spatial distribution of economic activities, the image of the area and the impact of the project on the people that work or live in the area. Surveys were held among 61 local shopkeepers, merchants, office workers and inhabitants in the research area and were spread evenly across the area.

To conduct the survey, the questions had to be translated into Korean and double checked. Also, a Korean introduction letter was used to explain the purpose of the survey. The English version of the survey questions and the results can be found in the appendix III. The purpose of the first research question was to map the spatial distribution of activities across the area. The research area was split up in a western (adjacent to the CBD) and an eastern part, further away from the CBD. The location of each survey was noted on a map of the area. The second and third questions were asked in order to analyze the spatial-economic consequences of the Cheonggyecheon project for the respondent. Since the questions were open, the most frequent opinions and results were integrated in the SWOT analysis itself and simplified in appendix V. The fourth question concerned the involvement of the surveyed people in the restoration project. Finally, the image of the research area could be defined by filling in multiple-choice questions about suggested images such as ‘the quality of the working environment’. The results can be found back in appendix IV, V and VI. After the data collection, data was analyzed with the statistics program SPSS. Descriptive statistics and frequency tables were used to define the spatial-economic characteristics and the image of the research area at the moment of this research. The results were transferred back into Microsoft Excel formats because the charts of Microsoft Excel have more clarifying functions than the SPSS charts.

3.4. Measuring the spatial-economic impact and image

The results of the surveys and the interviews are used in order to compare characteristics of the research area of before and after the Cheonggyecheon restoration. However, attention had to be paid when comparing these characteristics in order to make conclusions. The measured effects are not necessarily a result of the restoration project. An increase in real-estate prices in a certain area for example can also be the result of a certain policy or situation that led to real-estate price increases in a bigger area or region. For this reason, certain outcomes are often compared with the similar changes on a larger geographical scale. In order to measure the spatial and economic impacts as well as the changing image of the research area in Seoul’s Central Business District the next steps were taken. First the situation of the research area before the restoration was analyzed in the ‘Project Description’ with the use of secondary literature and information gained from interviews. The SWOT analysis and interview results were then used to determine the current and potential economic and spatial situation of the research area. The findings of mainly secondary literature were compared with the findings in the surveys and interviews. The surveys offered a clear overview of the spatial-economic characteristics of the area and define its image. On the other hand, interviews made clear which spatial-economic impacts and changes in the research area are more relevant. The next chapters provide a critical and descriptive analysis of the project. A comprehensive and critical vision will be developed about the impact of the Cheonggyecheon project.

4. Project description

This chapter of the thesis describes the history of the Cheonggyecheon stream and the motivation for the restoration of the stream. But most importantly, it examines the characteristics of the research area prior to the restoration in order to measure the impact of the project in the next chapter. Secondary information from existing literature was used to describe the area. First, some local historical events and characteristics of the research area and its surroundings will be described. Secondly, characteristics of the area prior to the restoration are presented. The third section shortly describes the actual restoration process itself. Finally, comparable urban regeneration projects are presented in order to map possible effects of these comparable projects on the local environment.

4.1 History of the Cheonggyecheon stream

In this section, a historic overview of the research area will be presented. Historic events related to the Cheonggyecheon stream are likely to influence the spatial-economic characteristics of its adjacent environment. In 1394 Seoul was chosen as the capital of Korea during the Joseon dynasty that lasted until 1910. The city of Seoul was divided into two parts by the Cheonggyecheon stream which formed a symbolic border between the northern and the southern part of the city. While the citizens lived in the south, palaces of the aristocracy were located north of the stream (Rinaldi, 2007). For several centuries during the Joseon dynasty, kings tried to regulate the stream and prevent flash flooding. In 1411, a water management authority was established to monitor the water levels. During the Japanese colonial occupation from 1910 until 1945, concerns were raised over public health issues as the Cheonggyecheon, which means clean water in Japanese, changed gradually into an open sewer (Rowe, 2010). Japanese colonial rule, the Second World War and the Korean War (1950-1953) all had a negative impact on the ecological quality of the river. In the aftermath of the Second World War in 1948, when the Republic of Korea was born, parts of the Cheonggyecheon were covered to serve as a new transportation route. After the Korean War, Seoul was destroyed and shanties formed along the remaining banks of the Cheonggyecheon stream (see figure 4.1.). Environmental deterioration, flooding and rapid industrialization of the South Korean economy led to local ideas and policies to cover the Cheonggyecheon stream (Lee, 2007; Cheonggyecheon Museum, 2012). The idea of covering the stream and creating new infrastructure matched with the South Korean government's policies of industrial progress at the end of the 1950's and the start of the 1960's. As a result, the stream was covered with asphalt in 1961.

From the 1960's onwards, the Korean economy kept growing and the country was seen as one of the emerging economies in Asia. In the research area, especially textile industries boomed. The covered Cheonggyecheon was used as an open-air market regularly. To meet the demands of an increasing flow of economic activities and traffic, a four-lane 5.8 kilometer expressway was built on top of the already existing cover from 1967 until 1976 (Lee, 2012). Infrastructure became a symbol of economic progress and national development (Rowe, 2010). The economic activities in the area increasingly generated more wealth but also more traffic. At its peak more than 170.000 vehicles per day (see figure 4.1.) crossed the Cheonggyecheon expressway (Rinaldi, 2007).

At the start of the 1990's, questions were raised about the growing amount of traffic and increased air pollution that led to local environmental degradation along the Cheonggye Expressway. At the end of the 1990's the concrete structure of the expressway deteriorated and it had to be repaired several times.

Figure 4.1. Slums along the Cheonggyecheon (1950's) and the Cheonggye expressway (1990's)



Source: Cheonggyecheon Museum (2012)

4.2. The research area prior to the restoration

In order to measure the spatial and economic impact of the Cheonggyecheon project on the research area and its image, the characteristics of the area prior to the restoration are described in this paragraph. Before the Cheonggyecheon restoration, the research area was characterized by several factors that negatively influenced the image, spatial-economic situation and competitiveness of the area. First of all, the research area that was located in Seoul's Central Business District experienced decreasing competitiveness. The area was mainly a commercial area and before the stream's restoration, offices of several banks and insurance companies were found in the upstream section. Further downstream in the research area, small manufacturers, merchants and light-industrial businesses were located. A lack of expansion space, ageing offices and a poor environmental quality resulted into the relocation of the majority of higher order services to a new commercial district in Gangnam (Rinaldi, 2007). Further downstream, small businesses and manufacturers were gradually losing their competitiveness. According to Rowe (2010) and Lee (2012), these businesses could not compete with the increasing number of commercial chains in Korea. Furthermore, the area was characterized by deterioration of the local environment (Lee, 2012). This was a result of traffic pollution and emissions from small local manufacturers. Chemical substances were found in the remains of the Cheonggyecheon stream underneath the asphalt cover. Environmental degradation led to a low quality of life in the area (OECD, 2005). Not only businesses left the area. From the 1970's onwards the area was also characterized by depopulation. Furthermore, since the area was mainly a commercial district, it became deserted during the nighttime when the businesses closed (OECD, 2005). Seoul's Central Business District started to hollow out.

"People only came to the area to do business" (Noh, 2012a)

On the other hand, the area was very well connected by road and public infrastructure. According to some transport and infrastructure experts, removing the Cheonggye Expressway could possibly lead to even more negative local effects like congestion or falling profits. However, improving the area was necessary to create lasting benefits for those who worked or lived in the area, as for Seoul as a whole (Rowe, 2010). The presence of the elevated expressway acted as a physical eyesore and became an obstacle for further development in the area. According to Noh (2012a), this was a serious problem. Seoul's Central Business District was the 'face of Seoul' because of its proximity to palaces and the old city center. The area, once Korea's symbol of economic progress, was declining.

4.3. Restoring the Cheonggyecheon stream

In 2002, candidate mayor of Seoul Lee Myung-bak proposed to restore the Cheonggyecheon stream during his campaign. He was inaugurated in July that year and the Cheonggyecheon restoration Project’s Headquarters were established. Early 2003, plans to restore the Cheonggyecheon stream were completed. In the summer of that year the expressway had been disabled and in October 2005, only 27 months after the start of the project, the Cheonggyecheon stream was restored and inaugurated (Kang and Cervero, 2008).

Figure 4.2. Significance of the Cheonggyecheon Restoration Project within Seoul’s visions



Source: Kim (2012c)

The Seoul Metropolitan Government presented various goals related to the restoration of the Cheonggyecheon stream (see figure 4.2.). As a result of the Rio Conference of 1992, that encouraged sustainable growth, Seoul’s urban planning paradigm shifted from rational and economic towards sustainable growth. In the Korean urban planning, more attention had to be paid to an integrated development, the quality of the environment and the local ecological aspects. The Cheonggyecheon

restoration project was the first major project in Korea that adapted this paradigm (Kim, 2012b). Local safety issues concerning the Cheonggye Expressway also contributed to the restoration of the Cheonggyecheon stream. Since the expressway was built, it was subject to continuous repair. Cracks began to appear in the concrete structure and corroded steel beams were found. Besides that, the top plates of the expressway were in a very poor condition. As a result, access was restricted to a maximum number of vehicles per day. It became clear that the elevated expressway, once one of the icons of economic progress, was unsustainable (Rowe, 2010).

From an ecological and cultural perspective the Cheonggyecheon restoration project could mean a positive impulse for the environmental quality. The removal of the elevated expressway had to reduce the traffic and car pollution in the area caused indirectly by the expressway. The use of public transport was encouraged to cope with the growing traffic flows. The project should also create green and open spaces where people could enjoy the environment (Kang and Cervero, 2008). The Cheonggyecheon project also aimed to improve the cultural and historical image of Seoul and the areas adjacent to the Cheonggyecheon stream. It had to boost the national pride through the restoration of cultural and historical artifacts from the Joseon dynasty located underneath the former Cheonggye Expressway. A physical barrier had to be removed, a network of heritage sites should be created and old bridges and historical artifacts had to be reintroduced into the area. The Seoul Metropolitan Government also wanted to build a more social and ecological friendly environment. Public spaces along the stream had to act as meeting places. Local markets, fountains, sculptures, waterside decks should create a more social or even romantic atmosphere.

From an economical perspective, the Cheonggyecheon project aimed to stimulate local economic development and to create a balanced regional growth (Kim, 2012b). The project aimed to reduce the socioeconomic differences between the CBD and the commercial district of Gangnam, south of the Han River. Further local depopulation had to be prevented, the accessibility had to be improved and new business opportunities had to be created. The Seoul Metropolitan Government hoped to create a synergy effect that maximized local private development in the CBD. Ultimately, the area had to be restored into a modern business center (Rinaldi, 2007; Cheonggyecheon Museum, 2012).

Costs of the Cheonggyecheon restoration project

The demolition and construction costs of the Cheonggyecheon restoration project were originally estimated to be U.S. \$350 million in 2003. This budget was exceeded by eight percent. The final price of the project itself (see table 4.1.) was around U.S. \$380 million or 386,7 billion Korean Won (OECD, 2005). The total costs of the project were financed by the Seoul Metropolitan Government’s general accounting budget. The costs were covered by savings from the Seoul Metropolitan Government’s 2003 budget, budgetary savings on other projects and the application of more efficient construction methods. Also, new administration methods and a reserved 100 billion Korean won for the reconstruction of the Cheonggye Expressway were used to cover the costs (Rowe, 2010).

Table 4.1 Total costs of the Cheonggyecheon Restoration Project. (Unit: Million Korean Won, KRW)

	2003	2004	2005	TOTAL
Design cost	2 097	x	x	2 097
Facility cost	93 203	209 219	74 074	376 496
Supervision cost	2 800	2 680	2 066	7 546
Facility incidental cost	200	200	200	600
TOTAL	98 300	212 099	76 340	386 739

Source: based on OECD (2005)

4.4. Comparable urban regeneration projects

This final paragraph describes comparable urban regeneration projects in order to predict possible effects of freeway removal and urban stream restoration on the local environment.

Freeway removal

The Cheonggyecheon project was not the first urban regeneration project related to freeway removal or the restoration of an urban stream. After the Second World War, the United States experienced increasing investments in its downtown areas by linking it to the interstate freeway system. These investments were implemented to revitalize city centers and to increase their accessibility. But at the time of the rise of downtown freeway, the inner city was in demise. The phenomenon of urban sprawl occurred and many people migrated out of the heart of the city. Just like the Cheonggye Expressway, freeways located in the heart of a city act as both a physical and psychological barrier, separating parts of the city and increasing the unattractiveness of the city center as a place to live, work or invest in (Cheng et al., 2010). In the 1980's and 1990's policies about large-scale infrastructure projects changed (Napolitan and Zegras, 2007). Freeway removal was seen as an economic catalyst in order to improve downtown areas.

In order to improve the environmental and economic conditions of many inner cities in the United States, city governments decided to deconstruct inner city freeways. Examples of deconstructed freeways are the Embarcadero, the Central Freeway (both in San Francisco, California) and the Portland Harbor Drive (Portland, Oregon). Following the 1989 earthquake in San Francisco, double-deck freeways along the waterfront (The Embarcadero) and land inwards (The Central Freeway) were torn down and replaced by attractive boulevards. But the Portland Harbor Drive (figure 4.3.) was the first and one of the most famous projects related to freeway removal. In 1974, a three mile freeway along the Milamette River was deconstructed. Downtown decline and urban sprawl to Portland's suburbs were the main reasons to tear down the freeway. Streets parallel to the former freeway were transformed into a linear waterfront park and a boulevard was created that accommodates both pedestrians and cars (Cheng et al., 2010). In order to maximize the efficiency of the local road capacity adjacent to the deconstructed freeway, reduced speed limits, one-way traffic roads and new traffic lights were introduced. According to the Seattle Urban Mobility Plan (2008) less traffic, transit support, more pedestrians, increased local property values and even lower crime rates were measured after the deconstruction and restoration.

Figure 4.3. Portland's waterfront (left) and San Francisco's Embarcadero (right)



Source: Visions 2200.com (2012)

Freeway removal projects like the Portland Harbor Drive can increase the safety and environmental qualities while reducing the number of vehicles in the area. Spillover traffic can be absorbed by different modes of transport and alternative routes. Besides that, an economic catalytic effect can be created because new land for development is available, resulting in increasing property prices and local investments. The potential effects closely match some of the desired effects of the Cheonggyecheon project, mentioned in the previous paragraph (Seattle Urban Mobility Plan, 2008).

Urban waterway restoration

The Portland Harbor Drive, the Embarcadero in San Francisco and other former freeways were often built in between downtown areas and the adjacent river and cut off the city from the water. By removing freeways, the access to these waterways can be restored by creating public spaces and boulevards. At the San Antonio River (Texas) not only the area next to the riverbank was restored, but also the river itself. The San Antonio River Walk (see figure 4.4.) is in many ways similar to the Cheonggyecheon project. Both projects are located in the heart of their cities. Besides that, the projects are both designed to positively boost the local economic environment. Thirdly, both projects use the river and its banks to create public spaces. However, the Cheonggyecheon project included more sustainable, ecological and social goals (Kang and Cervero, 2008). Like the Cheonggyecheon stream, the San Antonio River (Texas) became a sewer during the first half of the twentieth century. Regular floods threatened both people and property. In order to regenerate San Antonio's city centre and create a major tourist attraction, the river was restored and along its banks boulevards were constructed. To prevent future flooding, bypasses were built with gates at both ends of the river. In brochures, San Antonio was promoted in order to attract tourists and conventioners during the second half of the twentieth century (Leighninger, 1996).

The San Antonio River Walk proves that urban regeneration can positively influence local tourism opportunities. Nowadays the River Walk is the number one tourist attraction in Texas. The River Walk (or Paseo del Rio) offers two and a half kilometres of walkways. Just like at the Cheonggyecheon stream, more than twenty bridges are built to connect the both sides of the river. After the construction of the River Walk, restaurants, bars, shopping malls or small shops and a convention centre developed along its banks. The project created a spatial-economic impulse for the city. The environmental quality of the riverside area improved and a major tourist site was created in order to increase local revenues. Events, arts fairs and festivities were organized along the banks of the river. More than ten million tourists annually visit the River walk (Leighninger, 1996; San Antonio River Walk, 2012).

Figure 4.4. The San Antonio River Walk



Source: San Antonio River Walk (2012)

5. The local impact of the Cheonggyecheon restoration

5.1. Introduction

The main goal of this chapter is to analyze the impact of the Cheonggyecheon restoration project on the spatial-economic situation and image of Seoul's Central Business District (CBD). In order to do so, it is crucial to examine which stakeholders were involved in the decision-making process of the project. This is important because the stakeholders influenced or tried to influence the project's policies. These policies subsequently affect the way in which the research area is organized in both a spatial and an economic way. The spatial and economic characteristics of the area will be examined in the second part of this section by conducting a SWOT analysis. These characteristics influence the image of the research area. This image will be discussed in the third part of this section of the thesis.

5.2. The stakeholder analysis

This paragraph examines the most important stakeholders involved in the Cheonggyecheon project in order to answer the first sub question of this thesis: *“Who are the most important stakeholders and how are they related to the Cheonggyecheon restoration project? Which stakeholders benefit the most?”*. Findings about the roles that the stakeholders played in the project will be presented first. The results will be compared with findings from the theoretical framework. The next paragraph analyzes which stakeholders benefit the most to answer the second part of the sub question.

5.2.1 The stakeholders

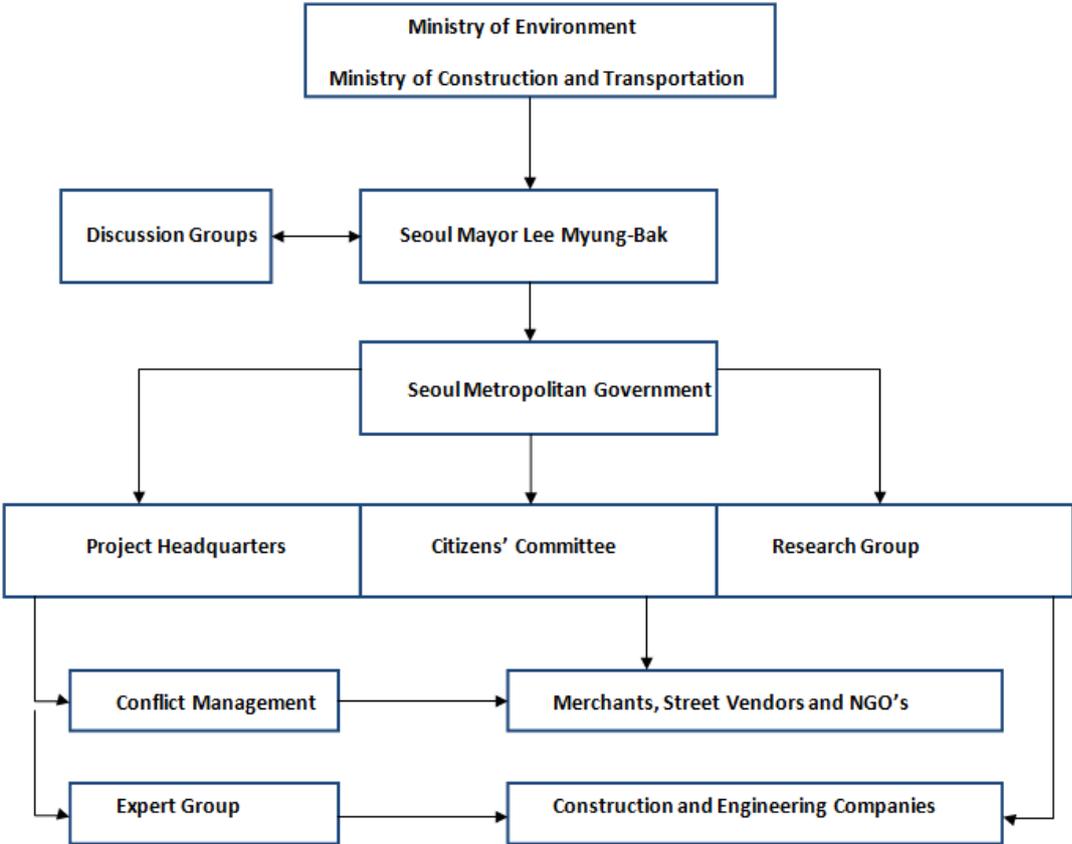
A stakeholder is an actor that has an interest in a certain project or process, influences it, or is affected by the project. A project or process can influence the stakeholder in different ways. A stakeholder can be an individual, or an organization or group of people. Stakeholders are crucial in the planning process of a certain project (Yosie and Herbst, 1998). Within the context of urban regeneration, it is important that stakeholders that are involved in a project respect each other and try to understand the intentions and goals of the other stakeholders. A strategic approach in an urban regeneration project can reveal the aims of the stakeholders and include these aims of the stakeholders into the decision-making process (Roberts and Sykes, 2000).

The different stakeholders that were involved in the Cheonggyecheon restoration project are presented in figure 5.1. The arrows in the figure indicate influences of the stakeholders on each other. In the figure, the Project Headquarters, the Citizens' Committee and the Research Group can be seen as one government body that can be divided into three interrelated sections.

Cheonggyecheon discussion groups

A group of about twenty Korean academics were the first stakeholders that came up with ideas to restore the Cheonggyecheon stream in 1999. Eight discussion groups were formed and representatives from Korea's five biggest NGO's were included. The main goal of the groups, that each focused on a different topic, was to make feasibility studies about the possible restoration (Hwang, 2012; Noh, 2012a).

Figure 5.1. Stakeholders involved in the Cheonggyecheon project



Source: based on “Related Government Bodies” (Rowe, 2010)

Mayor Lee Myung-bak

Former Seoul mayor Lee Myung-bak was the most important stakeholder in the Cheonggyecheon restoration project. As a member of the conservative Grand National party, he invited the discussion groups to present their ideas during his campaign to become the mayor of Seoul in 2002. Lee wanted to use the Cheonggyecheon project as his main campaign proposal. After Lee won the elections, he created a trilogy of organizations to manage the entire restoration: The Project Headquarters, the Citizens’ Committee and the Research Group which were led by academics from the discussion groups. Lee was the ultimate responsible for the project and took the final decisions. His leadership and vast network of business-relations within South Korea contributed to Lee’s decisiveness to complete the project, to become the mayor of Seoul and ultimately to become the 17th president of South Korea in 2007 (Kim, 2012b; Kwon, 2012).

The Seoul Metropolitan Government

The Seoul Metropolitan Government directed the Cheonggyecheon project. It drew up the project’s budget and controlled the operation. The Seoul Metropolitan Government was the only responsible stakeholder that financed the restoration project. Furthermore, it directed the construction companies involved in the project (Noh, 2012b).

Project Headquarters

The Cheonggyecheon Project Headquarter was a department within the Seoul Metropolitan Government, located in the Seoul City Hall. As a member of the trilogy of project related bodies, it

led the planning and execution of the project. It was established in July 2002 under the leadership of former Yonsei University professor in urban planning Yun-jae Yang. The Headquarter divided the project into three different construction sections and was responsible for the cooperation with affected stakeholders like local merchants, street vendors and NGO's. Conflict and management teams were created by the Headquarters in order to negotiate with these stakeholders. These teams comprised ten close business partners. The group had more than 4000 meetings with the different stakeholders such as merchants and NGO's (Row, 2010; Hwang, 2012).

Research Group

The second body of the project trilogy, the Research Group was created in order to make the project fit within broader planning issues such as the renewal of Seoul's CBD and the Han 2020 Renaissance Plan. According to Hwang (2012), former head of the Research Group, it consisted of academics and members of the Seoul Development Institute. The group created the Cheonggyecheon master plan while the Headquarters implemented it. Furthermore, it made forecast studies about local traffic situations and the final effects such as the change in water and air quality were monitored. The Research Group was an important stakeholder since its members were convinced of the 'paradigm shift' in urban planning in Korea from economic progress towards sustainable growth and quality of life. Consequently, these aspects were included in the project (Kim, 2012b; Noh, 2012a).

Citizens' Committee

The third body of the project's trilogy, the Citizens' Committee, was an opinion group. It represented public and expert opinions about the Cheonggyecheon project. In Korea it was the first time that citizens' participation had been included into a public project. The committee aimed to increase the understanding among the stakeholders of the project. Concerns and ideas of those involved in the committees were included into the project's planning. However, mayor Lee Myung-bak still exercised the final say in the decision-making process since he was the head of the committee (Noh, 2012a). The committee existed of six subcommittees, that each gathered opinions about different subjects such as citizens' opinions, historical concerns or ecological aspects. The members of each subcommittee were from different backgrounds such as experts, NGO representatives, journalists and government officials. However, only NGO's that supported the project were included in the Citizens' Committee (Kim, 2012a). At the end of the first Citizens Committee's term in 2003, a significant number of NGO representatives and experts that first supported the project resigned just before the end of their term. Their ideologies differed from the mayor's ideas, especially concerning conservation and restoration issues. Especially NGO's and experts urged to delay the project to make a statement. Like the Project's Headquarters, the Citizens' Committee also dealt with the opinions of merchant groups which often led to conflicts. Communication between the Citizens' Committee, merchants and the Project Headquarters was problematic. While NGO's and merchants that supported the project had regular meetings with the Project Headquarter, stakeholders that opposed the Cheonggyecheon restoration plans, and demanded compensation, could only express their concerns in the Citizens' Committee. More 'cross-meetings' had to be held to increase the understanding among the stakeholders (Kim, 2012a).

Merchants and street vendor's

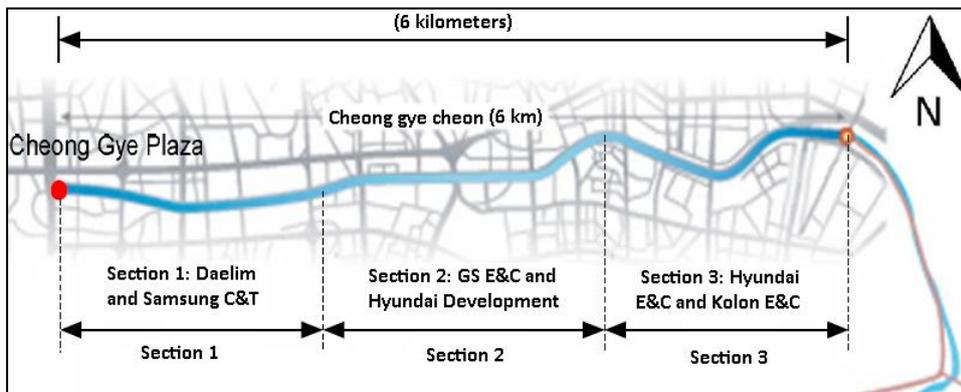
Local merchants and street vendors formed a Merchants Committee in 2002. Meetings with the Project Headquarters and the Citizens Committee were held regularly. Some merchants feared that

during the construction their accessibility would be affected and that they would lose their businesses. Besides that, local street vendors were relocated because of the project. These stakeholders wanted to get financial compensation from the Seoul Metropolitan Government because of the project and wanted to discuss their problems with the mayor directly. However, the only way to communicate was via the conflict and management teams. Mayor Lee made clear that financial compensation was not an option. Merchants were offered to relocate to a new commercial district called 'Garden Five'. About 4000 merchants accepted this offer but the majority stayed. Street vendors were offered to relocate to the Dongdaemun area (Hwang 2012; Kim, 2012a).

Construction and engineering companies

In order to increase the progress of the project, the construction site was divided into three segments. Each segment was subject to several bids by different construction and engineering consortia (Kim 2012b, Hwang, 2012). An independent committee selected construction and engineering consortia that made bids on the different segments. The Seoul Metropolitan Government elected the committee but was not allowed to get involved in the selection process to avoid lobbying. Several big Korean construction companies like Hyundai and Samsung Construction wanted to participate in the project because of its size and location. Three construction and engineering consortia were assigned. The role of the parties was to deconstruct the expressway, and to construct the stream, its landscape, bridges and sewers. Simultaneous construction by the three consortia was required in order to reduce construction time and costs. Each consortium had to maintain documentations and cost estimates. In the research area, a group of construction and engineering companies were assigned that was led by Daelim and Samsung Construction (figure 5.2.).

Figure 5.2. Construction sections and involved consortia



Source: based on "Sector division of the Cheonggyecheon" (Lee, 2012).

National Government

The Democratic Party ruled the national government during the time that the Cheonggyecheon project was planned and constructed (2002-2005). The Democratic Party was initially against the restoration of the Cheonggyecheon. During the planning and construction of the project, the Ministries of Environment, and Construction and Transport checked whether the progress of the project didn't break any national laws. The Ministry of Culture was mainly concerned with the preservation and restoration of artifacts of historic importance that were found underneath the Cheonggyecheon expressway (Kim, 2012b; Noh 2012a).

A political process

National and local politics influenced the final decision-making and outcome of the Cheonggyecheon restoration project. Lee Myung-bak used the Cheonggyecheon restoration as his main campaign subject for the mayoral elections in 2002. A vote in favor of Lee meant a vote in favor of the project (Noh, 2012a). The ruling Democratic Party feared that Lee Myung-bak, a member of the conservative Grand National Party, would become a popular candidate for the 2007 presidential elections if the project would turn out successful. The National Democratic Party kept a close eye on the project and tried to delay it. A delay meant that the project could not be completed before the presidential elections in 2007 which would significantly influence Lee Myung-bak chances as a candidate for the presidential elections. An example of attempts by the National Government to delay the project included not providing police permits prior to the start of the demolition and construction. Furthermore, traffic and civil engineers that supported the Democratic Party came up with reasons to delay the project by writing articles about possible traffic chaos and congestion. However, the president, Kim Dae-Jung, finally made the decision to support the project instead (Noh, 2012a; Hwang, 2012).

5.2.2. Stakeholder synthesis

In this paragraph, the results are related to the theoretical framework in order to answer the thesis's first part of the sub question: *"Who are the most important stakeholders and how are they related to the Cheonggyecheon restoration project? Which stakeholders benefit the most?"*

From the moment that Lee Myung-bak won elections and became the mayor of Seoul, the Cheonggyecheon was going to be restored. The mayor was the most important stakeholder in the decision-making process. Because of the elections, a lot of attention was paid to the project before the restoration had started. Positive and rapid development of the project would certainly affect the image of the areas adjacent to the Cheonggyecheon like Seoul's CBD. The mayor initiated the project and created a trilogy of government related stakeholders together with the Seoul Metropolitan Government that guided the project from the actual planning until the monitoring after the completion of the project. Other stakeholders, some more than others, also influenced the way in which the Cheonggyecheon project was going to be implemented. The fact that the communication between several stakeholders such as the Project Headquarters, the merchants and the Citizens' Committee was problematic might have consequences on the spatial and economic structure of the research area (Kim, 2012a). All the stakeholders and the public were included in the decision-making process which means that the project was the first big public project in which citizens' participation was included. However, survey results show that only 3,3 percent of the respondents were actually involved in the decision-making process (see appendix VI). Like Roberts (2000) stated about urban regeneration projects, the Cheonggyecheon project comprised integrated visions and actions in order to solve the urban problems in the research area and to create lasting improvements for the area. However, in contrast to Roberts and Sykes' (2000) and Metha's (2006) views on urban regeneration, the planning and restoring of the Cheonggyecheon stream itself was not a long-term process. The business approach of mayor Lee on public projects and time constraints in relation to the presidential elections were the main reasons for the rapid restoration of the Cheonggyecheon project. Even though citizen's participation was included in the project, it seems that Seoul's public bodies like the Project Headquarters had a bigger say in the planning and execution of the project

than smaller parties like the merchant committees and the NGO's. Whether the project created lasting benefits for the local environment will be examined in the next paragraph.

5.3. Spatial and economic impacts

In this section, the spatial and economic characteristics of the research area will be analyzed by conducting a SWOT analysis. Primary data was collected from a survey among 61 people that work or live in the research area. Furthermore, interviewees were asked about the current spatial and economic characteristics of the area. In order to measure the spatial-economic impact, the characteristics of the research area of before the Cheonggyecheon (see chapter 4) will be compared with the results from the SWOT analysis. Finally, the impacts will be analyzed in relation to the theoretical framework. For the results of the survey, it is advisable to look at appendix IV, V and VI.

5.3.1. The SWOT analysis

Next, the SWOT analysis will be conducted. SWOT means *strengths, weaknesses, opportunities and threats*. A SWOT analyzes the internal strengths and weaknesses of a certain project or policy. Besides that it also includes the external opportunities and threats into the analysis. Often SWOT analyses are used the wrong way because the meanings of the external effects are misunderstood. Opportunities and threats are aspects within the analysis that cannot be controlled by policymakers like technological progress (Voogd, 2006). In this thesis, a SWOT analysis is used to determine the current spatial-economic characteristics of the research area and its image. The spatial-economic impact will be determined by comparing the current and past local characteristics.

Internal effects

The internal effects of the Cheonggyecheon project will be analyzed first. These are the effects on which stakeholders and policymakers that were involved in project can or could exert influence.

Strengths

1. Doing businesses

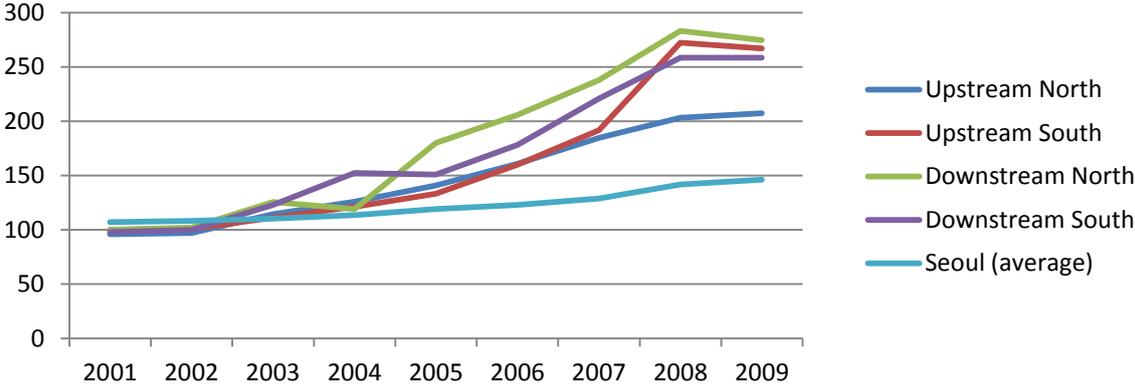
Results from the survey (see appendix IV) show that the research area is an attractive place to do business. More than half of the respondents characterize the area as a "good" or "very good" place to do business. Besides that, 82 percent of the respondents characterize the working atmosphere of the area as "pleasant" or "very pleasant". Respondents mentioned that profits for the majority of businesses increased as a result of the improved environment and the related activities. Thousands of Korean and foreign tourists visit the stream every day (Kim, 2012a). Existing businesses changed their strategies and many coffee shops and restaurants opened in proximity of the stream to benefit from the tourists. Besides these tourist related businesses, more white-collar workers return to the area. Financial services are attracted to the area because of higher amenities like firm proximity and accessibility (Hwang, 2012).

2. High local rents and real-estate values

As soon as the plans about Cheonggyecheon restoration were presented, the values of the adjacent properties increased dramatically. Figure 5.3. illustrates the growth in average real-estate values in

the research area. Since the start of the restoration, real-estate prices increased far above Seoul’s average in every single part of the research area. The areas mentioned in figure 5.3. closely match with the research area. According to Hwang (2012) in the Central Business District, from 2003 to 2008 the property values increased on average about 15 to 20% each year. This matches with the findings from the Korean Land Information System. Especially in the area south of the Cheonggyecheon, close to Cheonggye plaza, average property prices increased between 21 and 41 percent from 2006 until 2008. Speculations about investors purchasing plots of land in the area soared up the property prices and tax revenues as a direct consequence.

Figure 5.3. Indication of the increase in local real-estate values (2000-2009)



Source: based on Rowe (2010) and the Korea Land Information system (2012)

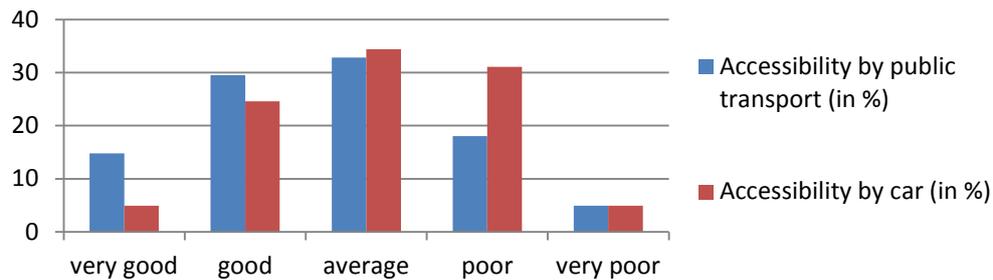
3. Ecological and historical quality

The environmental quality in the Cheonggyecheon area is better than in most other areas in Seoul (Kim, 2012a). However, it is unclear whether the environmental quality of the research area is better than in areas further downstream. The Seoul Development Institute measured lower temperatures and increased wind speeds in the area. So even though the research area is located in the heart of Seoul, the environmental quality improved. According to Hwang (2012) the pollution in the area is less than in other parts of Seoul because of the good accessibility via public transport. As a result, fish, insects and bird species returned to the area. Along the stream, historical artifacts, restored bridges and information signs inform visitors about the historical importance of the area during the Joseon Dynasty (Kim, 2012a). The ecological and historical quality increased the attractiveness of the area for its users (Kim, 2012b; Kwon, 2012).

4. Accessibility by public transport

According to the survey results, the accessibility of the area by public transport is ‘average’ to ‘good’ and better than the accessibility by car (see figure 5.4). Within the research area there is no significant difference between accessibility by public transport in the up and downstream area. Although there is only one subway station located in the research area itself, more than five subway stations surround the area with a maximum distance of no more than 300 meters. At some subway stations around the area, office blocks seem to cluster because of the increased accessibility. Several important inner city bus lines and bus-only routes run through the area and are connected to the nearby subway stations. Besides that, the T-Card, a new universal transfer system, makes the public transport system more efficient (Kim, 2012b; Hwang, 2012).

Figure 5.4. Accessibility of the research area by public transport and car



Source: survey outcomes

5. Tourist destination

Thousands of tourists visit the Cheonggyecheon stream every day. The stream is appreciated by both Korean and foreign visitors (Kim, 2012b). The restored historical artifacts and the location of the area close to Gyeongbok palace, Myeongdong, Insadong and other tourist attractions increases the likelihood for tourists to visit the research area. Especially during weekends thousands of people stroll along the stream and visit the area. Events and markets are organized to attract even more visitors (Hwang, 2012).

Weaknesses

1. Falling profits for some local specialized businesses

Not all the businesses in the research enjoy increasing profits. About 20 percent of the respondents characterize the research area as a bad place for doing business. Merchants and shopkeepers complain about falling profits. Even though no relation could be found between the location of certain businesses and the types of businesses in the area, it seems that especially the light-industrial and manufacturing businesses further downstream experience falling profits. According to Kim (2012b) and Hwang (2012), it might be difficult for these specialized shops to compete with business chains in contemporary South Korea. Noh (2012b) mentions that these businesses were already in decline before the stream restoration and knew that even when the Cheonggyecheon would be restored, their businesses will disappear on the long term anyway.

2. High local rents and real-estate values

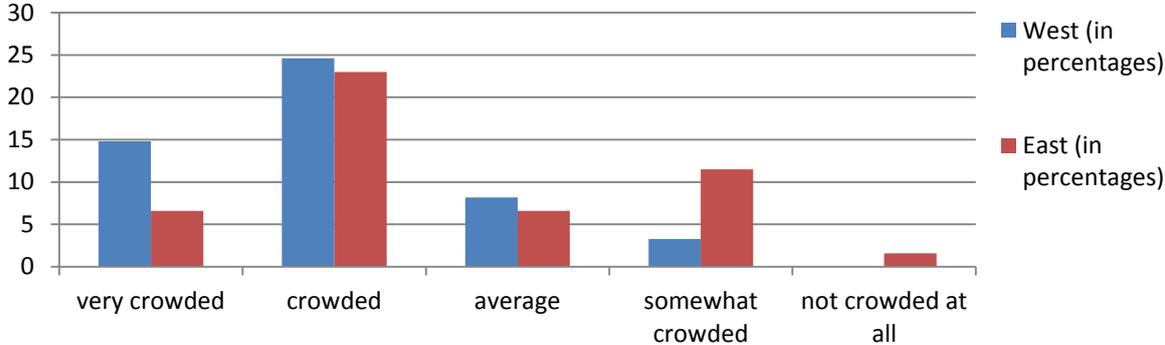
The increase in real-estate prices can be both a strength and a weakness. Most of the smaller businesses in the area do not benefit from the increased real-estate values as they rent their shops from local landlords (Kim, 2012b; Kim, 2012b). Only the landlords seem to benefit from increased real-estate values and are in the position to ask higher rents. Already, property developers struggle to agree with local landowners about the property acquisition in the research area. Delays in the negotiations between landlords and investors or property developers may discourage any further property development along the Cheonggyecheon stream (Hwang, 2012).

3. Accessibility by car and congestion

Even though the accessibility of the area by public transport improved, the local road capacity decreased and car traffic got diverged (Noh, 2012b). Several respondents experience negative consequences of early hour traffic jams, the small number of parking spaces, the narrow streets and the bad accessibility of their shop by car. Figure 5.5. indicates that more than two thirds, (68,9

percent) of the respondents characterize the area as crowded or very crowded. Especially the upstream part of the research area (west) can be characterized as a ‘crowded’ area with many people around. Furthermore, the survey results show that the accessibility by car in the downstream area could be characterized as ‘average’. However, no relation could be found between the location of the shops and the valuation of the accessibility of the research area.

Figure 5.5. How would you characterize the area in terms of ‘crowdedness’ with people?



Source: Survey outcomes

4. No complete historical and ecological restoration

Several NGO’s were not satisfied with the restoration of the Cheonggyecheon stream, because it was not restored in an ecological or natural way (Kim, 2012b; Noh, 2012a). Environmentalists claimed that nature should be restored without human interference afterwards. Also, experts and archeologists did not get enough time to excavate all the historical artifacts because of the time pressure of the project. However, according to Kwon (2012), the Seoul Metropolitan Government wanted to restore the stream so that people could enjoy it. Kim, (2012b) mentioned that ideas of some NGO’s about ecological stream restoration are not realistic in an urban environment.

5. Unexpected problems with the stream ecology

Unexpected problems with the ecology affected the image of the research area. In 2011 an increased death of fish in the area led to negative publicity. Some of the respondents from the survey complained about the bad smell of the water. Furthermore, the presence of mice and the growth of mosses led to higher maintenance costs (Kim, 2012a).

External Effects

Now that the most important internal characteristics of the area are determined, the external effects will be summed up and critically analyzed. The external effects are the effects that policymakers cannot control.

Opportunities

1. Attracting more businesses

The increased attractiveness of the area and the presence of local restaurants, coffee shops, offices and related services can attract even more businesses and people to the area. As long as real-estate prices stay at a reasonable level, businesses may choose to relocate to the research area to benefit from the amenities that might be created by scale-effects (Kim, 2012b; Hwang, 2012). Especially

finance and insurance companies might relocate to the southern part of the CBD area during times of economic prosperity (Hwang, 2012).

2. A synergy effect for further sustainable development

The green and sustainable environment in the core of Seoul's CBD may inspire other investors and property developers to include sustainability into their projects. Along the Cheonggyecheon stream and the Han River, projects like Seoul Forrest or Dongdaemun History and Culture Plaza can spur further sustainable development. Certain projects can change the image of Seoul into a sustainable and attractive city (Kim, 2012a). According to Kwon (2012) the Cheonggyecheon project was the start of a bigger restoration plan to restore and widen the Cheonggyecheon stream towards the Bukhansan mountain range. This can create local amenities on a larger scale. On the other hand private investors still seem to be reluctant to invest in sustainable urban projects (Hwang, 2012).

3. Opportunities for the tourism industry

Over 130 million people visited to the Cheonggyecheon stream since reconstruction. This indicates that the stream is a popular place for Koreans and foreigners (Noh, 2012a). Several shopkeepers and merchants mentioned that their profits increased significantly especially during markets or events in proximity of the stream. Thousands of Korean and foreigners visit the stream every day. In the upstream part of the research area, businesses try to take advantage of the increasing number of tourists (Hwang, 2012). However further downstream, small businesses indicate that profits are falling since the restoration of the stream, especially because their accessibility by car has been decreased. These merchants might take advantage of the situation by transforming their shops into more tourist orientated businesses in order to increase their profits. Especially since new pedestrian paths were created in proximity of these shops (Hwang, 2012).

Threats

1. Economic downturn

In case of an economic downturn, like in Europe since 2008, investors and property developers may decide not to invest in the area. However, Seoul and South Korea seem to be geographically located in the right part of the world. With the continuing growth of China's economy and still fast growing Korean economy it is not likely that this will happen on the short term (Kim, 2012b).

2. Possible threat of North Korea

In theory, South Korea is still in war with its only neighbor North Korea. The recent shift of power in North Korea seems to bring even more political instability to the Korean peninsula. The recent failed rocket launch, the threat of nuclear tests and threats from the North Korean army may scare possible foreign investors and tourists that might visit or invest in Cheonggyecheon area. This can influence the image of South Korea and the region in a negative way.

3. Ecological disaster

According to Kwon (2012), an ecological disaster is the main threat that the Seoul Metropolitan Governance cannot exert any influence on. Unexpected flooding or the possible presence of undesirable plants, insects or animals can damage the image and consequently the local economy. Besides that, undesired waste or pollution can affect the ecology along the stream in a negative way.

5.3.2. The SWOT model

Finally, in the SWOT model (see table 5.1.), the characteristics of the research area are summarized. These characteristics are important in order to understand the impact of the Cheonggyecheon project on the research area. These spatial-economic impacts will be analyzed in the next paragraph.

Table 5.1. The SWOT model

Strengths - (internal factors)	Weaknesses - (internal factors)
<ol style="list-style-type: none"> 1. Good place for doing businesses <ul style="list-style-type: none"> • <i>Good working atmosphere</i> • <i>Arrival of new businesses</i> 2. Increased local real-estate values <ul style="list-style-type: none"> • <i>Benefits for landlords and increased tax revenues</i> 3. Increasing attractiveness of CBD <ul style="list-style-type: none"> • <i>Ecological quality</i> • <i>Historical quality</i> 4. Good accessibility by public transport <ul style="list-style-type: none"> • <i>Bus-only lanes</i> • <i>Accessibility by subway</i> • <i>Universal transfer system</i> 5. CBD as a popular tourist destination <ul style="list-style-type: none"> • <i>Profits because of tourists</i> • <i>Events and markets increase attractiveness</i> 	<ol style="list-style-type: none"> 1. Falling profits <ul style="list-style-type: none"> • <i>Especially in downstream area</i> 2. Increased real-estate values <ul style="list-style-type: none"> • <i>Higher rents and delays in local property development</i> 3. Bad accessibility by car <ul style="list-style-type: none"> • <i>Less road and parking space</i> • <i>Early hour traffic jams</i> 4. NGO's not satisfied with historical and ecological restoration <ul style="list-style-type: none"> • <i>Time constraint for archeologists</i> • <i>Stream was not restored in an ecological way</i> 5. Unexpected problems of the stream's ecology <ul style="list-style-type: none"> • <i>Bad smell and presence of mice</i> • <i>High maintenance costs</i>
Opportunities – (external factors)	Threats – (external factors)
<ol style="list-style-type: none"> 1. Attracting new businesses <ul style="list-style-type: none"> • <i>Increased amenities and scale advantages</i> 2. Creation of synergy effect for further sustainable development <ul style="list-style-type: none"> • <i>Adaptation of sustainable concepts</i> • <i>Further local development</i> 3. Opportunities for the tourism industry <ul style="list-style-type: none"> • <i>More tourist orientated businesses</i> 	<ol style="list-style-type: none"> 1. Economic downturn <ul style="list-style-type: none"> • <i>Might affect further investment in the area</i> 2. North Korean threats <ul style="list-style-type: none"> • <i>Might affect foreign investment and the tourism industry</i> 3. Ecological disaster <ul style="list-style-type: none"> • <i>Might affect the local economy, ecology and image of the area</i>

5.3.3. The local spatial-economic impacts

In the project description of this thesis, the research area was characterized by numerous negative factors such as environmental degradation, congestion problems, a lack of expansion space for offices, bad business opportunities, the relocation of both offices and small businesses and depopulation. In order to tackle these problems, to improve the image of the area, to make the city more sustainable, and to find a balance between the two main economic centers in Seoul, the Cheonggyecheon stream was restored. Nine years after the start of the restoration of the stream in 2003, the mentioned findings collected by surveys and interviews are now related to the theoretical framework next in order to answer the second sub question: *“What are the spatial and economic impacts of the Cheonggyecheon regeneration project on the local environment?”*

Spatial impact

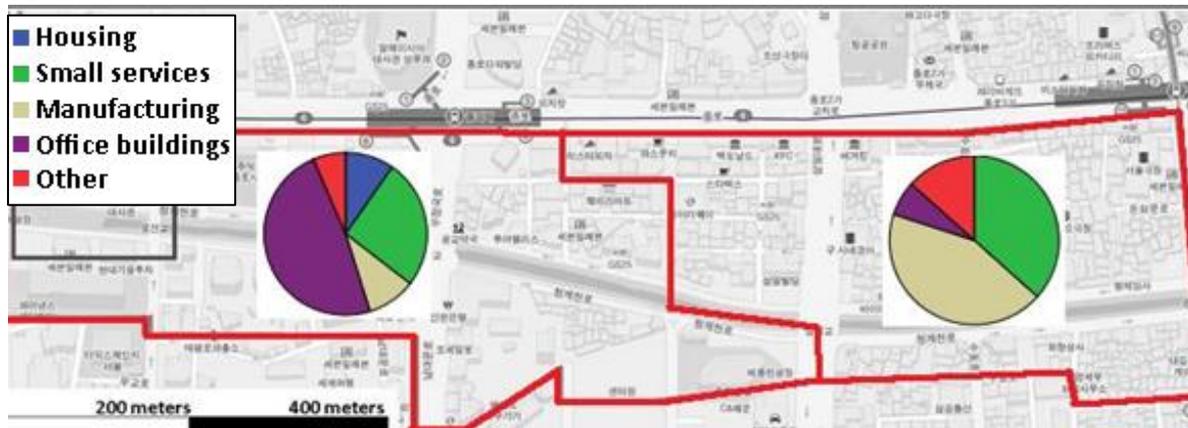
The Cheonggyecheon project did attempt to resolve urban problems and bring lasting improvements to the research area. The area can be characterized as a green and competitive business area. The local accessibility improved, congestion was reduced and the use of public transport was encouraged. Congestion problems were reduced by implementing one-way bus lanes and a universal transfer system improved the matching of different modes of transport (Hwang, 2012). However, not all stakeholders benefit from the shift from a car intensive area towards a public transport intensive area. The spatial-economic situations of certain stakeholders are related to each other. As a result, some businesses, especially from the downstream area, relocated to the outskirts of the city (Noh, 2012a).

Within the research area, a spatial distinction in types of businesses between the upstream (west) and downstream (east) area could be identified. Among those who were surveyed in the upstream area, 48 percent worked locally at an office and less than 10 percent in the manufacturing sector (see figure 5.6.). In the downstream area, 43 percent worked in the manufacturing industry and only 5 percent worked in office buildings. The distinction between the upstream and downstream area in types of businesses was created on purpose by the Seoul Metropolitan Government in order to create local economies of scale (Kwon, 2012). Businesses are free to locate wherever they want. However, the (higher) land prices and rents are likely to affect the types of businesses that are willing to move to certain parts of the research area. Further downstream, manufacturers and small service related businesses still dominate along the Cheonggyecheon stream. However, the relative number of offices along the stream increased since the restoration in 2003 and the relative number of manufacturers decreased with about 40 percent. In the research area this number is expected to be even higher. Especially the number of small services, like restaurants, bars and minimarts increased along the Cheonggyecheon stream. The growing number of tourists definitely influenced the spatial distribution of businesses along the Cheonggyecheon (Hwang, 2012; Noh, 2012a)

From an ecological perspective, the area now benefits from the local amenities of the stream. Even though the stream was not restored in a natural way like environmentalists and several NGO's proposed, the local ecology improved (Kim, 2012a). Tourists and white-collar workers are attracted to the area because of these local amenities created (Noh, 2012a). Again, this seems to be the case, especially for the upstream part of the area.

From a social perspective, Chan and Lee (2007) stated that regeneration projects can affect the social structure of the local area. Indeed, survey results showed that a positive working atmosphere characterizes the area. Before the restoration, people visited the area for business purposes only because of the bad environmental quality. But, the area changed into a social place where people can enjoy the environment (Kim, 2012b, Noh, 2012b).

Figure 5.6. The spatial distribution of activities in the research area



Source: based on Google Maps (2012)

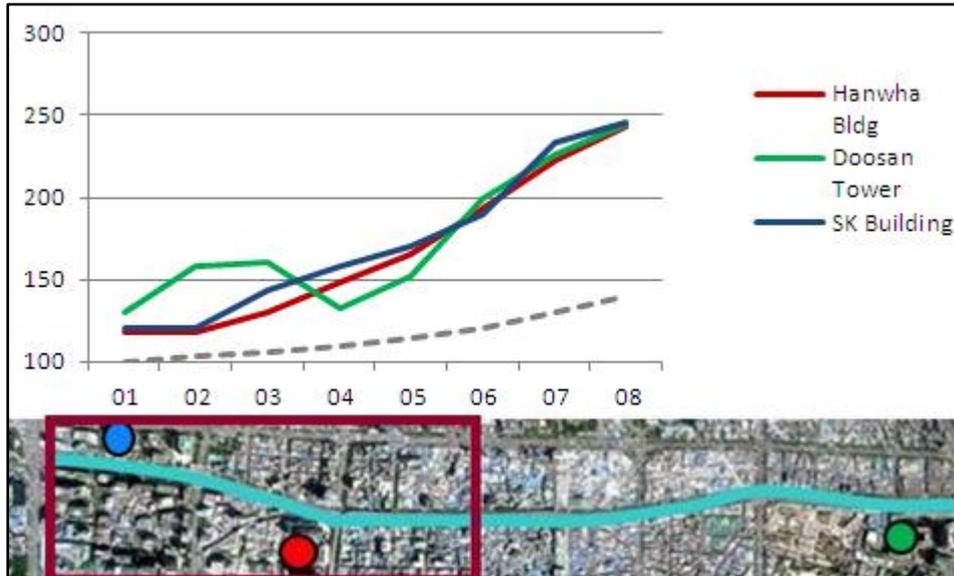
Economic impact

The Cheonggyecheon project definitely solved the major local problems. This is especially the case in the upstream part of the research area, where both public and private companies and investors are attracted to the area again. Profits for most of the businesses increased after the project was completed. Like at the San Antonio River Walk, some businesses focused on new customers, products or services to benefit from the increasing amount of tourists, office workers and related activities (Noh, 2012b; Hwang, 2012).

As has been mentioned by Salazar and Menéndez (2005) and Cervero (2009), the real-estate values did increase because of the proximity of a new urban park. The steep growth in real-estate prices might be the result of the small number of urban parks that can be found in Seoul. However, it is unclear whether there is a relation between the density of parks in an urban area and the growth in real-estate values close to urban parks like the Cheonggyecheon. Figure 5.7. indicates that the real-estate values more than doubled between 2001 and 2008 while the average real-estate value in Seoul only increased by forty percent. As a result tax revenues increased for the local government. Yet, the existing merchants in the downstream part of the research area still struggle to make profits. But for some businesses, the opportunity exists to adapt to the changing environment and to focus on tourists and office workers in the nearby upstream environment. This way the businesses might be able to compensate for the higher rents that they have to pay.

Smyth (1994), Anholt, (2008) and Ashworth (2011) discussed the importance of the integration of urban projects within broader policies in order to generate local benefits. Indeed, the Cheonggyecheon restoration project was also integrated within broader policies relating to sustainable development like the Han Renaissance Plan. However, the project can also create a synergetic effect that stimulates the development of other sustainable projects along the Cheonggyecheon stream or within Seoul (Kim, 2012b).

Figure 5.7. Real-estate prices in the research area (Index: '2000 = 100)



Source: based on Shin (2012)

Urban regeneration projects do not only solve problems, they can also create problems. In contrary to the mentioned effects of McCann (2001) and the American Planning Association (2002), higher real-estate values can negatively influence the economic development of an area. In the downstream part of the research area, the struggle between property developers, merchants, investors and landowners about the land and rental prices seems to delay the local economic development. The power of the local landowners really increased because of the increase of the value of their land (Hwang, 2012).

The American Planning Association (2002) and McCann (2001) argue that affluent retirees, knowledge workers and talented people are attracted to live close to green areas like the Cheonggyecheon stream. Hwang (2012) confirms that property developers are planning to build high quality residential housing to attract this group. However, as long as land owners and property developers cannot agree about the property prices, these projects will be further delayed. Kwon (2012) states that the Seoul Metropolitan Government does not want housing development in the area and might block certain projects. Interestingly, the opinions of the government related stakeholders do not match.

5.3.4. Which local stakeholders benefit the most?

This paragraph tries to answer the second part of the first sub question. *“Which stakeholders benefit the most from the Cheonggyecheon restoration project?”* Nearly all of the local stakeholders benefit from the Cheonggyecheon restoration project. Only a small number of merchants and light-manufacturers in the downstream area seem to experience problems with their accessibility because of the reduced number of roads. The fact that about twenty percent of the businesses seem to experience decreasing profits is probably not a result of the Cheonggyecheon restoration project. From a spatial-economic perspective, the newly arrived businesses and their visitors in the research area seem to benefit from the Cheonggyecheon restoration. These businesses often started in the area because of the proximity of the Cheonggyecheon stream and its amenities. Profits of tourist

orientated businesses such as restaurants, coffee shops or souvenir shops have also increased. Furthermore, certain banking and insurance companies seem to be attracted to the area. However, existing shops in the research area also benefit from the environmental quality and the increased number of visitors in the area.

Stakeholders that probably benefit the most from the project are the land owners. They rent the apartments or shops to local businessmen or inhabitants. However, because of the increased amenities and the improved environmental quality, the real-estate prices of the properties increased dramatically. As a consequence, the landowners can ask for higher rents and are in the position to ask high prices for their land to property developers that are willing to buy their land. With very little or no influence of the landowners in the decision-making process, they can be seen as free-riders.

Last but certainly not least, former mayor Lee Myung-bak benefited from the success of the Cheonggyecheon restoration project. Lee used Cheonggyecheon project as his main campaign subject in order to become the mayor of Seoul. The successful project contributed to Lee's popularity among the South Korean population which helped him to win the presidential elections in 2007.

5.4. A changing image of Seoul's CBD

This final section of the case study about the Cheonggyecheon restoration project analyzes the impact of the project on the image of the research area in Seoul's CBD. It is interesting to find out which stakeholders and spatial-economic characteristics affect the current image of the area. Like in the previous section, surveys among 61 local respondents, and personal interviews with stakeholders in the project were held to determine the area's image. The results of the survey can be found in appendix IV, V and VI. Finally, a comparison is made between the findings from the theoretical framework and collected primary data in order to answer the following sub question: *"Does the Cheonggyecheon restoration project contribute to the image of the local environment?"*

5.4.1. The changed image of the research area

A booming image

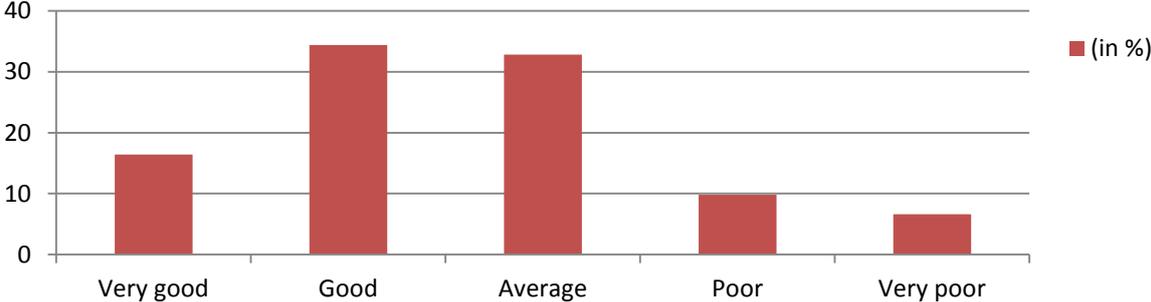
According to Hwang (2012), Kim, (2012b) and Noh (2012a), the image of the research area changed from a "dull" and "old fashioned" city center into a place characterized by good business opportunities (see figure 5.8). More than half of the survey respondents characterized the area as "good" or "very good" for doing business while 32,8 percent characterized the area's business image as average. According to some surveyed shop owners, local events like markets or festivals and an increasing number of visitors in the area, lead to bigger profits for specific businesses. Again, 82 percent of the surveyed people characterize the local working environment as "pleasant" or "very pleasant" contributing to the positive image of the area. A positive economic climate in the upstream area definitely changed the image of the CBD. In the downstream part of the research area, the economic opportunities seem to be less optimistic. However, this does not seem to affect the business image of the area since it has hardly been mentioned by respondents or interviewees.

According to Hwang (2012), there are more factors that contribute to the booming image of the area. First, the area is now livelier during the nighttime because more people start to live in the research

area again and the area attracts a lot of visitors. Secondly, more and more businesses are willing to relocate to the CBD. Especially financial, insurance and banking companies are willing to invest in the area.

The presence of often old-fashioned specialist businesses and manufacturers seem to contradict with the high-rise offices, restaurants and coffee shops closer to Cheonggye plaza (Kim, 2012a). In order to maintain the image of a booming area, property owners and investors have to make compromises about real-estate prices in the area. The Seoul Metropolitan Government can play an important role in creating compromises between these stakeholders and to maintain the good positive business image of the area.

Figure 5.8. How would you characterize the business opportunities in this area?



Source: Survey outcomes

A touristic image

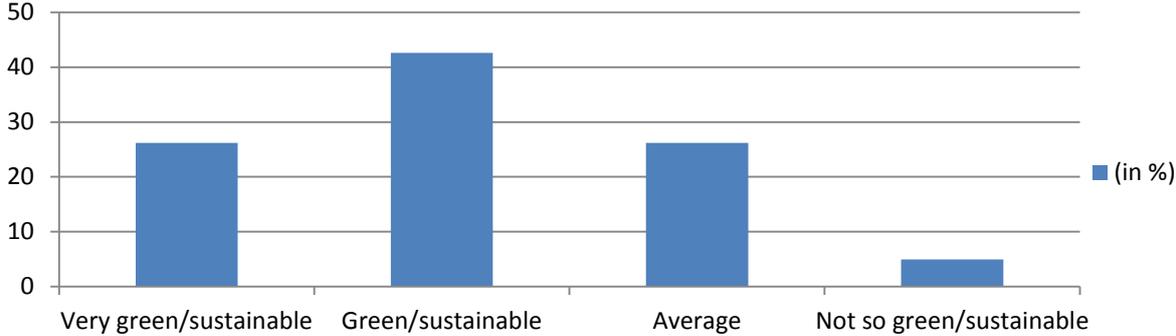
The research area changed into a true tourist attraction. Foreign tourists like to visit the ecological downstream section while Korean visitors prefer to visit the upstream part of the stream that has an urban character (Kim, 2012b). The restoration of traditional artifacts and bridges contributed to the touristic image of the area (Noh, 2012a). The increasing number of visitors led to the creation of new “tourist walking routes” within the city center (Hwang, 2012). Besides that, media attention during the 2002 mayoral elections might have influenced the popularity of the area. Several respondents answered positively about externalities of the Cheonggyecheon project, referring to the increasing amount of tourists that visit the area. Not only does the Cheonggyecheon stream attract tourists. Local festivals, markets and other activities that were mentioned in the previous section also attract many domestic and international tourists and influence the image of the area. Small convenient stores, restaurants and coffee shops especially seem to benefit from the increasing amount of tourists as these shops seem to establish in numbers close to the stream (Noh, 2012b; Kim, 2012b). Many inhabitants of Seoul visit the stream during the weekends when streets are closed to make way for more pedestrians. Kim, (2012b) states that many visitors really want to see the Cheonggyecheon stream because the local area has been subject to change.

A green and sustainable image

According to Kang and Cervero (2008) and Rowe (2010) one of the aims of the Cheonggyecheon project was to transform the Central Business District into a sustainable and green environment. A balance had to be found between people and nature. According to the survey, nearly two thirds of the respondents would characterize the environment as “very green and sustainable” or “green and sustainable” (see figure 5.9.). Only five percent characterizes the environment as not green and

sustainable. Hwang (2012) and Noh (2012b) both mention that the image of the area definitely changed into a green and sustainable image. However, NGO's still criticize the project for not restoring the stream into a fully natural and ecological but into an urban stream. When asking about the positive externalities of the Cheonggyecheon project for the local businesses, respondents often answered that as a result of improved ecology and environmental quality, new businesses are attracted to the stream.

Figure 5.9. Survey outcomes: Would you characterize the environment as 'green' and 'sustainable'?



Source: survey outcomes

A new city icon

The Cheonggyecheon restoration project created not only positive or negative externalities for certain local stakeholders. It also became a new icon of the city. According to Kim, (2012b) there were no underlying marketing policies from the Seoul Metropolitan Government or the Project's Headquarters to create a new city icon. However, the Cheonggyecheon stream in the research area can now be seen as a new icon of the city (Kim 2012b; Hwang 2012; Noh 2012b). Before the project, most of Seoul's city brands were related to historical locations or landmarks like Gyeongbok palace, Bukhansan Mountain or the Han River. Since the stream was restored in 2005, a new icon was created that refers to present Seoul (Kim, 2012b). Furthermore, the area and the stream are included in many travel guides like the Lonely Planet (2010) and World Travel Guide (2012). At subway stations in proximity of the stream, direction signs guide visitors to the Cheonggyecheon stream. Moreover, various television documentaries such as Discovery Channel paid attention to the Cheonggyecheon restoration project strengthening the symbolic value of the stream as an icon of Seoul (Kim, 2012b).

"Preserving nature and history at the core of the downtown, that's how we want to depict our Korea" (Hwang, 2012)

The Cheonggyecheon became an icon of a "new Korea" while the former Cheonggye Expressway represented growth and economic progress of the second half of the twentieth century. Because of the previously mentioned change in the 'urban planning paradigm' and the restoration of the Cheonggyecheon, the research area now represents a balance between people and the environment. The project symbolizes a shift in Korean urban planning from rational economic planning towards sustainable and comprehensive urban planning (Kwon, 2012). This is especially the case because the Cheonggyecheon project was the first public project in Korea where a compromise between the stakeholders was found.

5.4.2. Analysis of the image

“Does the Cheonggyecheon restoration project contribute to the image of the local environment?”

According to the surveys and interviewees, the Cheonggyecheon restoration project contributed to the image of local environment and to the creation of a new icon of Seoul. The image of the research area changed from a declining and polluted area into a green and touristic business area characterized by environmental quality as well as sustainable development. Moreover, the research area is part of the ‘face’ of Seoul. As a result not only the image of the research area but the image of the entire city changed (Noh, 2012a; Hwang, 2012; Kim, 2012b; Kim, 2012b). The Cheonggyecheon stream in the area became an ‘urban image carrier’ (Hospers, 2011). Both qualitative and diversification policies mentioned by Ashworth and Voogd (1987) seem to match the underlying policies of the Seoul Metropolitan Government and the Project Headquarters aims. Not only tourists and businesses were attracted to the newly regenerated area (Diversification policy), the vast amount of existing businesses and inhabitants also seem to benefit from the restoration of the stream (Qualitative policy).

From the economic perspective, the restoration project clearly improved the business image of the area. The Cheonggyecheon project brought local development and investment back to the area that contributes to this image. However, like Ashworth (2011) mentioned, not all local stakeholders (like some small manufacturers and merchants) benefit from the restoration contributing to the image in the downstream part of the area. From a sustainability perspective, the project was mainly a statement from the urban planners. Ashworth (2011) mentioned that flagship projects (like the Cheonggyecheon project) can be a statement. In the case of the Cheonggyecheon, the statement was Seoul’s shift in the urban planning paradigm from economic growth towards comprehensive urban planning, sustainable growth and environmental quality. According to Kwon (2012) even more similar public projects can be expected that transform Seoul into a more sustainable city. From a touristic perspective, the restoration of the stream improved the environmental quality. It restored local cultural and historical artifacts and as a result tourists are attracted to the area.

The four mentioned images that characterize the research area all seem to strengthen each other. These characteristics match with the ‘local development’ that flagships can generate. The Cheonggyecheon restoration project played a big role in changing this local image. However, in order to maintain or improve this image, it is important that the Cheonggyecheon project is integrated within broader policies that specifically underline sustainable development (Noh, 2012b).

5.5. Findings and theories compared

This final part of the case-study section compares the statements that were presented in the theoretical framework with the results from the primary data collection.

- 1. Urban regeneration is a complicated and a long-term process that aims to improve the local environment. In order to find solutions for urban problems, comprehensive and integrated visions and actions are needed.***

The Cheonggyecheon restoration project needed comprehensive planning. Again, the project was the first public project in Korea in which the public was involved. However, due to the

political structure, the important role and decisiveness of mayor Lee Myung-bak, the project finished within 27 months indicating that urban regeneration projects do not necessarily have to be long-term. However the speed of the project completion did not benefit all stakeholders in the research area. Besides providing solutions, urban regeneration projects like the Cheonggyecheon can also create problems.

2. ***In Korea, governments play a key role in urban regeneration policies which are often state-led. However, more and more stakeholders are getting involved in urban regeneration policies in order to avoid conflicts between stakeholders and to turn projects into a success.***

The Cheonggyecheon project was just like other urban regeneration projects in Korea state-led. The national government however played a minor role in the project. It was led by the Seoul Metropolitan Government and the mayor via the Projects Headquarters and its related departments. The creation of the Citizens Committee probably avoided most of the internal conflicts. However, communication problems existed between certain stakeholders and compromises had to be made to compensate especially local merchants and street vendors.

3. ***Urban regeneration projects, like flagship projects, should not stand alone or only consist of symbolic actions. They should be integrated into long-term broad regional, national or even international policies in order to make them successful.***

The use of the Cheonggyecheon restoration as a key campaign subject during the mayoral election campaign and the shift in the urban planning paradigm indicate that the project can be characterized as a flagship project. Several interviewees (Noh, 2012b; Hwang, 2012; Kwon, 2012; Kim, 2012a) pointed out that the project is the start of a 'make-over' of Seoul towards a sustainable and people-friendly city. Several policies and organizations stimulate the integration of the Cheonggyecheon project into Seoul's CBD renewal policies and the 'Han 2020 Renaissance project'. This indicates that the Cheonggyecheon project was not merely a 'symbolic project'.

4. ***It is difficult to prioritize environmental problems when cities face many other economic or social problems. However, in general, urban green spaces can positively affect the local environment in an ecological, social, psychological and economical way.***

Overall, the Cheonggyecheon project proves that (positive) changes in the local ecology and environmental quality (history and culture) can create a synergy effect that positively affects specific local businesses, makes the area more attractive for investments and creates a tourist attraction which again influences certain local businesses mainly in a positive way.

5. ***Urban regeneration projects can be used in order to tackle the environmental challenges that cities face in the twenty-first century by trying to create a more sustainable environment.***

The Cheonggyecheon restoration project improved the ecological quality of the environment in numerous ways. A wind corridor was created, average temperatures decreased, plants, insects and fish returned to the area. Local pollution levels decreased as a result. As long as the benefits of certain urban regeneration projects on the local environment and its stakeholders are greater than the costs, urban regeneration projects can definitely create a more sustainable environment.

6. ***City marketing and urban regeneration policies are intertwined. Both policies aim to change the urban landscape by creating long-term benefits for the users of the city. Urban regeneration policies can be used as a city marketing tool to define a city's image.***

In the case of the Cheonggyecheon project, urban regeneration in Seoul's CBD led to the marketing of the area. The use of the project in the political campaign definitely increased the popularity of the project among the Korean population, which might lead to the large number of visitors. Interviewees (Noh, 2012a; Hwang, 2012; Kim, 2012a) indicate that the project created a new 'icon' of Seoul. The spatial distribution of economic activities changed. Overall, benefits for the local environment were created. For most of the businesses profits increased in the downtown area and the number of investments and tourists increased. This contributed to the 'booming, green and touristic image' of the area. Unfortunately, it seems to be impossible in the case of the Cheonggyecheon to create long-term benefits for all of the users of the research area.

6. Conclusions

In this thesis, step by step, each section contributed to the purpose of this research: analyzing the spatial and economic impact of the Cheonggyecheon project on the local environment (Seoul's CBD) and its image. First, different insights, ideas and theories concerning urban regeneration projects, city marketing and urban green spaces were explored in the theoretical framework. Secondary literature was also used in the project description in order to describe and identify the local spatial-economic characteristics of the research area prior to the Cheonggyecheon restoration. After that primary data was gathered and via surveys, interviews and a SWOT analysis the characteristics and image of the current research area could be defined. By comparing the characteristics of the research area before and after the restoration, and relating this to the stakeholders' analysis and the theoretical framework, the research question will be answered: *"In which ways does the Cheonggyecheon regeneration project contribute to the spatial and economic structure of the local environment and its image?"*

6.1. Conclusions

The Cheonggyecheon project proves that urban regeneration can make cities more sustainable and improve the spatial-economic environment at the same time. The improvement of the local ecology resulted in numerous positive effects on the local environment in both spatial and economic ways. In the Cheonggyecheon project's case it appeared that the image of Seoul's Central Business District and the local spatial and economic structure are interrelated. In this final chapter conclusions about the changed spatial structure in the area will be discussed first. Secondly, the conclusions about the economic impact of the Cheonggyecheon project will be explained. Thirdly, the changed image of the area will be presented. Finally, the 'interrelatedness' of these three aspects that strengthen each other in various ways will be explained.

A changing spatial structure

The Cheonggyecheon restoration changed the spatial pattern of activities and the physical environment in Seoul's Central Business District. In general the accessibility of the area increased, both by public transport and by car, even though the number of roads in the area decreased. Various policies related to the Cheonggyecheon project led to a relief in traffic pressure since cars are now diverted towards other local roads. An increase in the relative use of public transport and the slightly decreased local car traffic matches with Seoul's policies to change the CBD into a 'sustainable and green' area. As a result of the Cheonggyecheon restoration, the local ecology restored gradually. Less air pollution was measured after the restoration while plant, insect and bird species returned to the area. However, some environmentalists still claim that the stream should have been restored in a completely natural way. From a social perspective, people returned to the area to enjoy the environmental quality. Both the stream and its direct surrounding changed into meeting places for visitors and locals. Furthermore, thousands of tourists wander along the stream daily but especially during weekends. Consequently, new walking trails appeared between the area and other touristic locations such as Insadong and Gyeongbok palace. Also, a change in the spatial businesses structure occurred. In general, light-manufacturers and inefficient small businesses relocated. But some businesses changed gradually into more tourist and leisure orientated businesses such as restaurants

or coffee shops. In the upstream area, offices related to the finance and insurance sectors (re)appeared. The area changed into an attractive place to work and live. Property developers are even willing to construct high quality apartments to the area that is dominated by commercial activities.

A changing economic structure

Besides these spatial effects, the local economic structure also altered as a result of the Cheonggyecheon project. First of all, local businesses in the upstream area seem to experience increasing profits because of high numbers of visitors and the festivities or events that are organized. Especially tourist orientated shops seem to benefit while in the downstream part of the research area, a vast amount of merchants experience a loss of profits. One can argue that this is the result of negotiations between the Project Headquarters and the merchants themselves, and that the Project Headquarters did not include the opinions and demands of the merchants into the outcome of the project enough. However, these small-businesses were already in decline before the project started. All in all, the area changed from a deprived and low quality business environment into a booming and profitable Central Business District. On average, the real-estate prices in the area more than doubled, while Seoul's average real-estate prices only increased by forty percent. Besides that, vacancy rates for office spaces decreased even compared to other business districts like Gangnam. It is likely that as a result, the tax revenues of the local government increased. However, local businesses were negatively affected by the increased rental prices. Local landlords seem to have a monopoly position as they demand higher rental and land prices than property developers and investors are willing to pay. This may affect further economic development in the area.

A changing local image

The image of Seoul's CBD, often called the 'face of Seoul', changed from an area characterized by pollution, congestion, depopulation and declining commercial activities into an area that can be characterized by sustainability, business opportunities, environmental quality, and tourism. Transforming the elevated expressway into the green and sustainable 'flagship project' mentioned by Ashworth (2011) meant a paradigm shift in Korean urban planning. The centrality, uniqueness and environmental quality of the Cheonggyecheon stream changed the image of the city. As a result, the stream attracted many visitors to the area. The comprehensive strategies used during the decision-making process and the use of the project during the 2002 elections increased public awareness and the popularity of the project among Seoul's inhabitants. Strengthening the local environment and changing its image led, without any underlying policies, to the 'marketing' of Seoul's city center. Culture, history and nature were brought back to Seoul's city center and these amenities definitely attracted both businesses and tourists who also influence the image of the research area. Therefore, the marketing of a city can also be a result of the improvement of the local environment. Monitoring the image and features that define the image are crucial, because the image of the area is interrelated with the spatial-economic characteristics of the area.

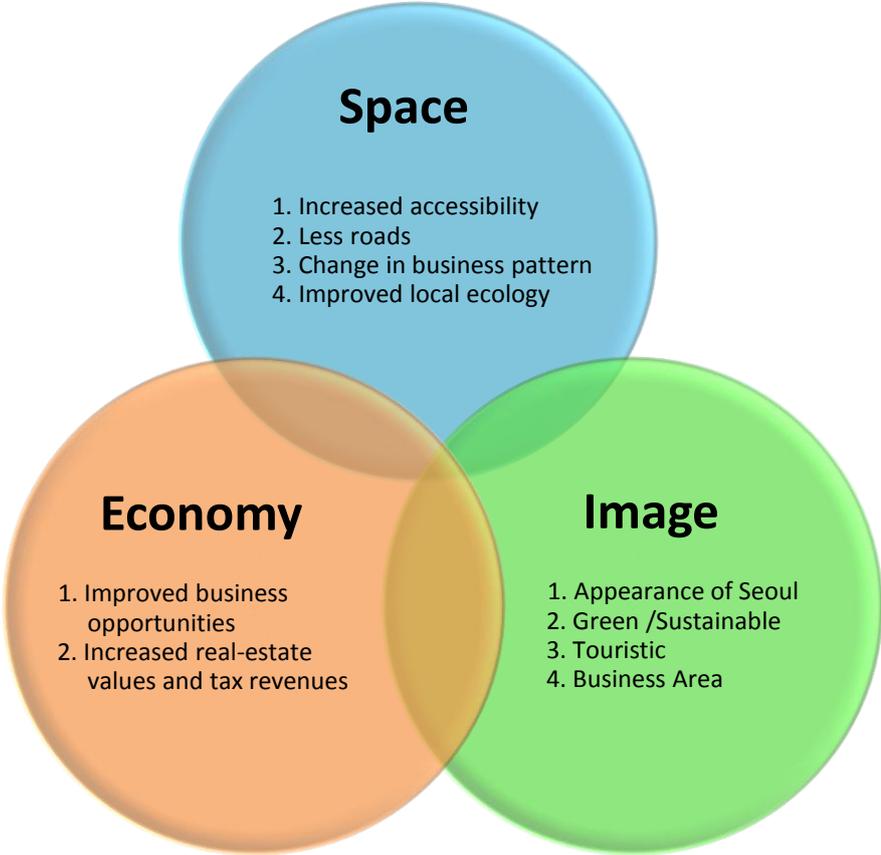
Interrelatedness

The improvement of the local environmental quality through the restoration of the Cheonggyecheon stream and its ecology led to the effects mentioned above. Due to the restoration of the stream, a

synergy effect was created that positively influenced the local environment in the mentioned spatial and economic ways. The local effects that occurred in the area turned out to be interrelated. These effects are simplified and illustrated in figure 6.1.

In short, as soon as the stream was restored, the environmental quality improved. At the same time, the accessibility of the area improved. Both locals and tourists were attracted to the area because of the location, accessibility and environmental quality. The increasing number of visitors created new business opportunities which led to a change in the local business pattern. Real-estate prices increased in the area which affected further development and the spatial business pattern in the area. Environmental amenities, an improving business climate, and a growing number of tourists together with its centrality changed the image of the area positively. Vice versa, the positive image seems to attract more visitors, businesses and property developers. The monitoring and management of the changing area, governmental policies and negotiations between property developers and landlords are likely to affect further development of the area. Due to the interrelatedness of the current characteristics, it seems that the overall 'positive image' of the CBD should remain intact in order for the area to develop further. The area can be characterized as a green, touristic and accessible city center with good business opportunities. However, this last characteristic is only valid for certain types of businesses. Monitoring and integrating the local developments within broader regional or national policies like the 'Han Renaissance 2020 plan' are necessary to validate the project and the paradigm shift towards sustainable urban planning and development. However, the impacts of these broader urban regeneration projects and policies in Seoul and Korea on the local environment might lead to very different results.

Figure 6.1. Interrelated characteristics of Seoul's CBD



6.2 Recommendations

This thesis finally concluded that the Cheonggyecheon restoration project changed the spatial-economic structure of Seoul's CBD and its image. In short, the environmental quality improved, the accessibility increased (especially via public transport) business opportunities improved, the spatial business pattern changed and the real-estate prices increased which all influenced the image of the area (and vice versa) into a vibrant place where businesses, tourists and nature meet.

However, as soon as the research questions were answered even more questions can be raised. The thesis analyzed the impact of the Cheonggyecheon project on local and spatial structure and image of the research area adjacent to Seoul's CBD. However, new questions arise such as: "What is the spatial-economic impact of the project further downstream?". Even within the research area itself, businesses in the downstream area seem to benefit less from the amenities of the stream. And are future urban regeneration projects in Seoul likely to generate similar effects? Furthermore, can similar effects be expected in other cities or countries that have a higher density of urban parks and in what kind of cities and countries is this likely to happen? Are the spatial-economic effects of urban regeneration stronger in city centers? If these questions can be answered, policies can be made about sustainable development and urban regeneration projects for different types of cities or regions. More comprehensive local and national policies that aim to restore stream and rivers are necessary in order to improve the environmental quality of cities and regions in the long term. As long as ecological and environmental improvements result into economic, social and spatial benefits for the local environment, sustainable urban regeneration policies can be a very effective tool in order to make cities more sustainable. The combination of strategic and comprehensive planning together with strong leadership appeared to be a successful formula that can be applied in other cities as well. Ultimately, restoring the ecology by finding a balance between people and nature is important in order to reduce or control the negative human impact on the natural environment. Hopefully, this thesis is a small step towards the sustainable cities of tomorrow.

6.3. Reflection

In Korean and English, a lot has been written about the Cheonggyecheon Restoration Project. But not a lot of academic research has been done on the project. Much of the literature written about the Cheonggyecheon is about the actual construction of the project or about architecture or the ecological impacts of the project. In the academic literature, there is a lot of written material about urban regeneration, the impact of urban parks, city marketing and infrastructural projects. This research attempted to link the scientific material about the above mentioned topics with the Cheonggyecheon project. From both a scientific and a social perspective it turned out to be very relevant to find out which local spatial and economic impacts were caused by the restoration of the Cheonggyecheon. Besides that it was interesting to see whether the project changed the image of the local environment. Because even though the project is unique in its own context, similar effects might occur for other sustainable urban regeneration projects.

Theoretical reflection

Improving the economic, physical, social and environmental conditions of the local environment (like in Seoul's CBD) indeed need comprehensive visions and actions (Roberts and Sykes, 2000).

However, the Cheonggyecheon case proved that urban regeneration projects not necessarily have to be long-term projects. Leadership and an integrated vision from all the stakeholders involved did contribute to the (in general) positive effects that the Cheonggyecheon stream created for the local environment. However, implementing a project too fast can have negative effects on certain stakeholders.

Interestingly, theories and the very basic assumptions between city marketing and urban regeneration seemed to correspond much more than first expected. Even though the main goal of the Cheonggyecheon restoration project was to revive the city center and improve the environmental quality, the marketing of the city center happened instantaneously. Apparently flagship projects do not always need extensive marketing campaigns in order to achieve certain goals such as creating (long-term) benefits for of the local environment.

Finally, because of the lack of detailed English academic literature about urban regeneration in Korea, the effects of the project cannot be compared with similar Korean urban regeneration or river restoration projects. However, since the Cheonggyecheon restoration project was the first project that included public participation in a public project in Korea, it is doubtful whether the effects of this project can be compared with any other project. A lack of qualitative theories about the economic effects of urban parks or public projects challenged the way in which theories and results could be related to each other. Impacts of urban green spaces in the theoretical framework were often based on social and ecological values rather than spatial-economic values. However, comparing the spatial and economic impacts of urban green spaces in the heart of a city of more than ten million people with any other city or project might be a difficult task. The Cheonggyecheon project is a unique project on its own.

Reflection of the methodology and content

Because of the lack of academic English literature about the Cheonggyecheon restoration project, and especially about the research area, this research relied on subjective primary data sources. When examining the effects of an urban regeneration project by conducting a descriptive analysis it is very difficult not to include subjective views into an objective thesis. Background information about Korean politics and the hierarchical system was used in order to cope with the subjective views during the interviews and surveys. Moreover, the translator that joined during some of the interviews informed about the position of the interviewees within the Seoul Metropolitan Government.

The analysis of the spatial-economic situation of the research area, as well as the image, was done with the help of a SWOT analysis. More often than not, a SWOT analysis is used in order to determine the characteristics of a local environment or project in order to analyze or choose certain (future) policies. However, in this thesis, the SWOT analysis was used in order to measure the spatial and economic characteristics of the area. The SWOT presents these local characteristics in a simple and clear way. However, different underlying relations between the characteristics are harder to describe. Furthermore, in an ideal situation, it would be better to examine the characteristics of the research area with the same research methods before and after the restoration. However, this thesis was written more than six years after the completion of the Cheonggyecheon project. On the one hand, this means that effects of the project could be analyzed over a relative long time period so that

the effects become clearer. On the other hand, secondary literature and interviews had to be used in order to determine the characteristics of the area prior to the restoration. As a result, memories (positive or negative) of interviewees about the research area might be blurred or simplified, while documents about the pre-construction time might be biased in order to be sure that the project would be implemented. In order to carry out a representative survey for the research area, the surveys that were held were evenly distributed across the area. Still, questions can be raised about this method. It appeared to be impossible to survey people that lived or worked above the ground floor level. Furthermore, certain types of businesses, especially merchants and employees active in the small-manufacturing sector, seemed to be reluctant to participate in the surveys. More effort was put in surveying these people as that seemed to be crucial to increase the representativeness and value of this thesis. Often, the results of the surveys seemed to match with the descriptions and opinions of the interviewees about the research area which indicates that a representative population was used in this research.

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Interviews (see appendix I)

Hwang, K.Y. (2012), Professor at Hongik University [Interviewed: 17-04-2012]

Kim, I.C. (2012a), Professor at Dongguk University [Interviewed: 15-05-2012]

Kim, W.S. (2012b), Research manager at Seoul Development Institute [Interviewed: 22-03-2012]

Kwon, W.T. (2012), Deputy mayor at the Seoul Metropolitan Government [Interviewed: 08-05-2012]

Noh, S.H. (2012a), Professor at Yonsei University [Interviewed: 02-05-2012]

Noh, W.S. (2012b), Head of the Seoul Water Management Team [Interviewed: 27-03-2012]

Appendix I Interviews

Interviews were the main source of primary data collection in this thesis. The interviewees, listed chronologically below, were all intensively involved in the Cheonggyecheon project. During the interviews, semi-structured questions were asked about personal opinions, views and experiences and about the roles of the different stakeholders in the project. Furthermore, the interviewees were asked about the spatial and economic impact of the Cheonggyecheon project on the research area and its image. In this appendix, the value of each individual interview is described shortly.

- 1. Kim (2012b), Woon Soo**
(22-03-2012) Professor Kim works for the Seoul Development institute and is the former research manager of the monitoring process of local, especially ecological, impacts of the Cheonggyecheon project. Kim informed about these impacts as well as the role of stakeholders.
- 2. Noh (2012b), Woon Sung**
(27-03-2012) Noh was the head of the water management team at the Seoul Metropolitan Government. First the exact role of the Seoul Metropolitan Government and its related compartments were explained. Also, local changes in the research area were clarified. During the interview, Korea University assistant Injae Hwang acted as a translator.
- 3. Hwang (2012), Kee Yeon**
(17-04-2012) Professor Hwang from Hongik University was the former head of the Cheonggyecheon Research Group and was involved in a small group of academics that discussed the restoration prior to the actual project itself. Hwang shared information about the Research Group, the changed image of the CBD and the role of politics during the project.
- 4. Noh (2012a), Soo Hong**
(02-05-2012) As a former head of the Research Group and vice president of the Cheonggyecheon Citizens' Committee, professor Noh clarified the role of merchants and other stakeholders related to the Citizens' Committee. He also described the project as the new 'icon' of Seoul.
- 5. Kwon (2012), Wan-Tack**
(08-05-2012) Kwon is the current deputy mayor of Seoul and former director of the Cheonggyecheon Project Headquarter. Kwon was involved in the planning of the project and clarified the role of the mayor in the project and the integration of the project within broader sustainable urban regeneration project. Again, Injae Hwang acted as a translator.
- 6. Kim (2012a), Il-Chung**
(15-05-2012) Professor Kim is the chairman of the Citizens' Movement for Environmental Justice, and was the head of one of the six subcommittees in the Citizens' Committee. The views, goals and roles of NGO's related to the Cheonggyecheon restoration were explained.

Appendix II Main structure of interview questions

Ask if it is OK to record the interview

- Introduction: Who am I, where am I from and what am I writing my research about.
- Can you tell me something about yourself and your function in relation to the project?
- Can you tell me something about the roles of the different stakeholders that were involved in the Cheonggyecheon project?
- In which ways were the local inhabitants and business involved in the decision-making process?
- What are the short and long-term consequences of the project for businesses in the area?
- What are the short and long-term consequences of the project for those living in the area?
- Can you describe the spatial and economic impact of the project on Seoul's CBD?
- Do you think that new or different shops or companies will establish along the stream?
- In which ways is the project integrated into broader urban regeneration policies?
- Did the Cheonggyecheon project influence the image of Seoul's Central Business District?
- Can you describe the image of Seoul's Central Business District?

Do you know someone else that I could interview that can give me some valuable information about the Cheonggyecheon project? Preferably another stakeholder.

Appendix III Survey

Question 1.

What function does this building have at this particular moment?

- A. Housing
- B. Services
- C. Manufacturing
- D. Office buildings
- D. Office Building
- E. Park
- F. Other

Question 2.

What are the benefits of the Cheonggyecheon project for the owner of this building?

Question 3.

What are the negative consequences of the Cheonggyecheon project for the owner of this apartment/shop/office?

Question 4.

Were the current owners of this building involved in the planning process of the Cheonggyecheon project?

- A. YES
 - B. NO
- If yes, in which ways?

Question 5.

Did the Cheonggyecheon project change the image of the Cheonggyecheon area? In which ways?

<input type="checkbox"/> Doing business	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Average	<input type="checkbox"/> Not so good	<input type="checkbox"/> Bad
<input type="checkbox"/> Pleasant to work	<input type="checkbox"/> Very pleasant	<input type="checkbox"/> Pleasant	<input type="checkbox"/> Average	<input type="checkbox"/> Not so pleasant	<input type="checkbox"/> Not at all
<input type="checkbox"/> Green/sustainable	<input type="checkbox"/> Very green	<input type="checkbox"/> Green	<input type="checkbox"/> Unchanged	<input type="checkbox"/> Less green	<input type="checkbox"/> Not green
<input type="checkbox"/> Crowded, busy	<input type="checkbox"/> Very crowded	<input type="checkbox"/> Crowded	<input type="checkbox"/> Average	<input type="checkbox"/> Less crowded	<input type="checkbox"/> Deserted
<input type="checkbox"/> Accessibility by car	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Average	<input type="checkbox"/> Not so good	<input type="checkbox"/> Bad
<input type="checkbox"/> Accessibility by public transport	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Average	<input type="checkbox"/> Not so good	<input type="checkbox"/> Bad

After the survey, the location where the respondent works or lives was indicated on a map.

Appendix IV Survey results: Type of business and image

Type_Of_Business (question 1)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Housing	3	4,9	4,9	4,9
	Small services	19	31,1	31,1	36,1
	Manufacturing	16	26,2	26,2	62,3
	Office building	17	27,9	27,9	90,2
	Other	6	9,8	9,8	100
	Total	61	100	100	

Doing_Business (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	10	16,4	16,4	16,4
	Good	21	34,4	34,4	50,8
	Average	20	32,8	32,8	83,6
	Poor	6	9,8	9,8	93,4
	Very poor	4	6,6	6,6	100
	Total	61	100	100	

Pleasant_Work_Environment (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	28	45,9	45,9	45,9
	Good	22	36,1	36,1	82
	Average	10	16,4	16,4	98,4
	Poor	1	1,6	1,6	100
	Total	61	100	100	

Green_and_Sustainable_environment (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very green/sustainable	16	26,2	26,2	26,2
	Green/sustainable	26	42,6	42,6	68,9
	Average	16	26,2	26,2	95,1
	Not so green/sustainable	3	4,9	4,9	100
	Total	61	100	100	

Location (drawn on map after each respondent)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	West	31	50,8	50,8	50,8
	East	30	49,2	49,2	100
	Total	61	100	100	

Crowded_with_people (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very crowded	13	21,3	21,3	21,3
	Crowded	29	47,5	47,5	68,9
	Average	9	14,8	14,8	83,6
	Somewhat	9	14,8	14,8	98,4
	Very crowded	1	1,6	1,6	100
	Total	61	100	100	

Accessible_by_car (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	3	4,9	4,9	4,9
	Good	15	24,6	24,6	29,5
	Average	21	34,4	34,4	63,9
	Poor	19	31,1	31,1	95,1
	Very poor	3	4,9	4,9	100
	Total	61	100	100	

Accessible_by_public_transport (question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	9	14,8	14,8	14,8
	Good	18	29,5	29,5	44,3
	Average	20	32,8	32,8	77
	Poor	11	18	18	95,1
	Very poor	3	4,9	4,9	100
	Total	61	100	100	

Appendix V Survey Results: Spatial-economic effects.

Survey results of question 2 and 3.

No. of interview	Survey question 2: What are benefits of the Cheonggyecheon project for you as the user of this building?	Survey question 3: What are the negative consequences of the Cheonggyecheon project for you as the user of this building?
1	-	-
2	-	-
3	More tourists	-
4	-	-
5	Increased profits	-
6	Increased profits and more crowded	Bad air and dirty roads
7	Increased profits	-
8	The total gross income increased	-
9	-	-
10	More tourists	-
11	Increase in property value	Expensive rental prices, rush hour congestion
12	More tourists, improved area	Presence of mice. Water has a bad smell
13	Buildings get more expensive, they build 'big buildings'	-
14	Increase profits	-
15	-	-
16	More crowded area. Everyone wants to buy property here.	-
17	Many brands, many firms, more people	-
18	Increase in property value	Congestion
19	-	-
20	-	-
21	-	-
22	Increase in property value	-
23	Business want to be close to the stream	Congestion
24	The ecosystem got better	-
25	Increased profits	-
26	-	Fall in profits, bad business
27	Cleaner roads, cleaner area	-
28	-	Less customers, less sales
29	Increased profits	-
30	Increased profits	-
31	-	-
32	More tourists and tourists paths	-
33	More customers and tourists because of festivals and events	Overcrowded area and bad accessibility
34	Rise in profits because of many people	-
35	-	-
36	-	-
37	Lamp festival so large profits, many tourists	- Shop is located too far away from the stream
38	Increased profits	- Low profits when there are demonstrations
39	Located to the area because it improved, so they rented a shop	-
40	Nice and improved area. More tourists.	A lot of litter, dirty area
41	There are many festivals that lead to lots of profits	-
42	There are many people because of tourism	Crowded, congestion
43	There are more customers	Noisy and dirty area
44	Bigger benefits/profits because more customers and people	-
45	Large benefits	-
46	Many visitors	-
47	-	-
48	There is a lot of nature, which is very nice	-
49	Increase in property value	Less profits, decreased competition
50	-	Deprived of their businesses
51	Nice view, nice area, many festivals and events,	-
52	-	-
53	Many visitors	-
54	-	-
55	Increased profits	-
56	More sales, more profits	-
57	-	Less customers, less sales
58	-	-
59	-	-
60	-	-
61	-	-

Appendix VI. Survey Results: Involvement in the project

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	59	96,7	96,7	96,7
Yes	2	3,3	3,3	100,0
Total	61	100,0	100,0	

Appendix VII. Relation between location and image

		Type_of_Business					Total	
		Housing	Small services	Manufacturing	Office building	Other		
Location	West	Count	3	8	3	15	2	31
		% of Total	4,90%	13,10%	4,90%	24,60%	3,30%	50,80%
	East	Count	0	11	13	2	4	30
		% of Total	0,00%	18,00%	21,30%	3,30%	6,60%	49,20%
Total		Count	3	19	16	17	6	61
		% of Total	4,90%	31,10%	26,20%	27,90%	9,80%	100,00%

		Doing_Business					Total	
		Very good	Good	Average	Poor	Very poor		
Location	West	Count	5	12	9	2	3	31
		% of Total	8,20%	19,70%	14,80%	3,30%	4,90%	50,80%
	East	Count	5	9	11	4	1	30
		% of Total	8,20%	14,80%	18,00%	6,60%	1,60%	49,20%
Total		Count	10	21	20	6	4	61
		% of Total	16,40%	34,40%	32,80%	9,80%	6,60%	100,00%

		Pleasant_Work_Environment				Total	
		Very good	Good	Average	Poor		
Location	West	Count	15	10	6	0	31
		% of Total	24,60%	16,40%	9,80%	0,00%	50,80%
	East	Count	13	12	4	1	30
		% of Total	21,30%	19,70%	6,60%	1,60%	49,20%
Total		Count	28	22	10	1	61
		% of Total	45,90%	36,10%	16,40%	1,60%	100,00%

		Green_and_Sustainable_environment				Total	
		Very green/sustainable	Green/sustainable	Average	Not so green/sustainable		
Location	West	Count	8	16	6	1	31
		% of Total	13,10%	26,20%	9,80%	1,60%	50,80%
	East	Count	8	10	10	2	30
		% of Total	13,10%	16,40%	16,40%	3,30%	49,20%
Total		Count	16	26	16	3	61
		% of Total	26,20%	42,60%	26,20%	4,90%	100,00%

		Crowded_with_people					Total	
		Very crowded	Crowded	Average	Somewhat	Deserted		
Location	West	Count	9	15	5	2	0	31
		% of Total	14,80%	24,60%	8,20%	3,30%	0,00%	50,80%
	East	Count	4	14	4	7	1	30
		% of Total	6,60%	23,00%	6,60%	11,50%	1,60%	49,20%
Total		Count	13	29	9	9	1	61
		% of Total	21,30%	47,50%	14,80%	14,80%	1,60%	100,00%

Location * Accessible_by_car Crosstabulation

			Accessible_by_car					Total
			Very good	Good	Average	Poor	Very poor	
Location	West	Count	1	6	12	9	3	31
		% of Total	1,60%	9,80%	19,70%	14,80%	4,90%	50,80%
	East	Count	2	9	9	10	0	30
		% of Total	3,30%	14,80%	14,80%	16,40%	0,00%	49,20%
Total		Count	3	15	21	19	3	61
		% of Total	4,90%	24,60%	34,40%	31,10%	4,90%	100,00%

Location * Accessible_by_public_transport Crosstabulation

			Accessible_by_public_transport					Total
			Very good	Good	Average	Poor	Very poor	
Location	West	Count	3	10	11	5	2	31
		% of Total	4,90%	16,40%	18,00%	8,20%	3,30%	50,80%
	East	Count	6	8	9	6	1	30
		% of Total	9,80%	13,10%	14,80%	9,80%	1,60%	49,20%
Total		Count	9	18	20	11	3	61
		% of Total	14,80%	29,50%	32,80%	18,00%	4,90%	100,00%

Appendix VIII. Relation between type of business and image

Type_of_Business * Doing_Business Crosstabulation

			Doing_Business					Total
			Very good	Good	Average	Poor	Very poor	
Type_of_Business	Housing	Count	0	1	2	0	0	3
		% of Total	0,00%	1,60%	3,30%	0,00%	0,00%	4,90%
	Small services	Count	2	6	6	2	3	19
		% of Total	3,30%	9,80%	9,80%	3,30%	4,90%	31,10%
	Manufacturing	Count	3	6	4	2	1	16
		% of Total	4,90%	9,80%	6,60%	3,30%	1,60%	26,20%
	Office building	Count	5	6	6	0	0	17
		% of Total	8,20%	9,80%	9,80%	0,00%	0,00%	27,90%
	Other	Count	0	2	2	2	0	6
		% of Total	0,00%	3,30%	3,30%	3,30%	0,00%	9,80%
Total		Count	10	21	20	6	4	61
		% of Total	16,40%	34,40%	32,80%	9,80%	6,60%	100,00%

Type_of_Business * Pleasant_Work_Environment Crosstabulation

			Pleasant_Work_Environment				Total
			Very good	Good	Average	Poor	
Type_of_Business	Housing	Count	0	2	1	0	3
		% of Total	0,00%	3,30%	1,60%	0,00%	4,90%
	Small services	Count	7	7	5	0	19
		% of Total	11,50%	11,50%	8,20%	0,00%	31,10%
	Manufacturing	Count	8	6	1	1	16
		% of Total	13,10%	9,80%	1,60%	1,60%	26,20%
	Office building	Count	11	5	1	0	17
		% of Total	18,00%	8,20%	1,60%	0,00%	27,90%
	Other	Count	2	2	2	0	6
		% of Total	3,30%	3,30%	3,30%	0,00%	9,80%
Total		Count	28	22	10	1	61
		% of Total	45,90%	36,10%	16,40%	1,60%	100,00%

Type_of_Business * Green_and_Sustainable_environment Crosstabulation

			Green_and_Sustainable_environment				Total
			Very green/sustainable	Green/sustainable	Average	Not so green/sustainable	
Type_of_Business	Housing	Count	0	2	1	0	3
		% of Total	0,00%	3,30%	1,60%	0,00%	4,90%
	Small services	Count	4	6	7	2	19
		% of Total	6,60%	9,80%	11,50%	3,30%	31,10%
	Manufacturing	Count	5	8	3	0	16

	% of Total	8,20%	13,10%	4,90%	0,00%	26,20%
Office building	Count	7	7	2	1	17
	% of Total	11,50%	11,50%	3,30%	1,60%	27,90%
Other	Count	0	3	3	0	6
	% of Total	0,00%	4,90%	4,90%	0,00%	9,80%
Total	Count	16	26	16	3	61
	% of Total	26,20%	42,60%	26,20%	4,90%	100,00%

Type_of_Business * Crowded_with_people Crosstabulation

			Crowded_with_people					Total
			Very crowded	Crowded	Average	Somewhat crowded	Deserted	
Type_of_Business	Housing	Count	1	0	2	0	0	3
		% of Total	1,60%	0,00%	3,30%	0,00%	0,00%	4,90%
	Small services	Count	2	12	1	3	1	19
		% of Total	3,30%	19,70%	1,60%	4,90%	1,60%	31,10%
Type_of_Business	Manufacturing	Count	5	8	0	3	0	16
		% of Total	8,20%	13,10%	0,00%	4,90%	0,00%	26,20%
	Office building	Count	5	7	3	2	0	17
		% of Total	8,20%	11,50%	4,90%	3,30%	0,00%	27,90%
Type_of_Business	Other	Count	0	2	3	1	0	6
		% of Total	0,00%	3,30%	4,90%	1,60%	0,00%	9,80%
Total	Count	13	29	9	9	1	61	
	% of Total	21,30%	47,50%	14,80%	14,80%	1,60%	100,00%	

Type_of_Business * Accessible_by_car Crosstabulation

			Accessible_by_car					Total
			Very good	Good	Average	Poor	Very poor	
Type_of_Business	Housing	Count	0	1	1	1	0	3
		% of Total	0,00%	1,60%	1,60%	1,60%	0,00%	4,90%
	Small services	Count	0	3	4	10	2	19
		% of Total	0,00%	4,90%	6,60%	16,40%	3,30%	31,10%
Type_of_Business	Manufacturing	Count	2	4	6	4	0	16
		% of Total	3,30%	6,60%	9,80%	6,60%	0,00%	26,20%
	Office building	Count	1	6	8	1	1	17
		% of Total	1,60%	9,80%	13,10%	1,60%	1,60%	27,90%
Type_of_Business	Other	Count	0	1	2	3	0	6
		% of Total	0,00%	1,60%	3,30%	4,90%	0,00%	9,80%
Total	Count	3	15	21	19	3	61	
	% of Total	4,90%	24,60%	34,40%	31,10%	4,90%	100,00%	

Type_of_Business * Accessible_by_public_transport Crosstabulation

			Accessible_by_public_transport					Total
			Very good	Good	Average	Poor	Very poor	
Type_of_Business	Housing	Count	0	1	2	0	0	3
		% of Total	0,00%	1,60%	3,30%	0,00%	0,00%	4,90%
	Small services	Count	2	2	7	6	2	19
		% of Total	3,30%	3,30%	11,50%	9,80%	3,30%	31,10%
Type_of_Business	Manufacturing	Count	4	7	3	1	1	16
		% of Total	6,60%	11,50%	4,90%	1,60%	1,60%	26,20%
	Office building	Count	3	6	7	1	0	17
		% of Total	4,90%	9,80%	11,50%	1,60%	0,00%	27,90%
Type_of_Business	Other	Count	0	2	1	3	0	6
		% of Total	0,00%	3,30%	1,60%	4,90%	0,00%	9,80%
Total	Count	9	18	20	11	3	61	
	% of Total	14,80%	29,50%	32,80%	18,00%	4,90%	100,00%	