

Eco-City on the Rise

A Study on Green Capitalism, Neoliberal Planning and
Corruption in China's Eco-City Development

Jian Chen Jehpsson

Master Thesis Series in Environmental Studies and Sustainability Science,
No 2014:026

A thesis submitted in partial fulfillment of the requirements of Lund University
International Master's Programme in Environmental Studies and Sustainability Science
(30hp/credits)



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Submitted May 15, 2014

Supervisor: Wim Carton, LUCID, Lund University

Abstract

In 2011, China's urban population surpassed its rural population for the first time in the history when it reached 690 million. The massive urbanization has resulted in a booming of urban housing and infrastructure. Consequently, crowded infrastructure systems burdened by an increasing urban population and severe environmental problems like air pollution have become the main challenges for Chinese cities. In recent years, the Chinese government has begun to envision an urban future with so-called eco-cities. Eco-city development is largely supported by national and local governments since it appears to be a solution not only to environmental sustainability in the mounting critique against Chinese cities' environmental condition but also a way of attracting green capital investment.

In this thesis, I have attempted to understand the relationship between green capitalism, neoliberal planning and corruption in the context of China's eco-city development. The case study of Dongtan eco-city in Shanghai is used as an empirical venue to apply the above conceptual frameworks. The data collection is based on literature review of academic journals, news articles, reports and qualitative/ quantitative secondary data. My study shows that corruption facilitates eco-city projects supported by the concept of neoliberal planning; the neoliberal planning strategy intensifies intercity competition for green capital investment, which in turn increases the likelihood of corruption as a result of public and private actors seeking economic and career advances through illegal practices. A lack of effective supervision from the public and civil society groups exacerbates the situation and leads to a vicious circle of systemic corruption. My study offers new insights into China's eco-city development and shows the importance of anti-corruption for urban sustainability.

Key words

Green capitalism, neoliberal planning, corruption, intercity competition, China, eco-city, sustainability, urbanization

Word Count

13781

Acknowledgement

I feel very fortunate to have had the chance to study in a master program at Lund University and write this master thesis, and there are certain debts of gratitude I wish to acknowledge. I would like to thank my supervisor Wim Carton and other members of my supervision group. Thanks to my friend Caren, Professor Anne Jerneck and Professor Christine Wamsler for their inspiration and help during my early confusion over choosing a topic. Thanks to my classmate Klara for her company, discipline and all the "fika" that helped me get through the lonely writing process. Thanks to my parents-in-law for their support and interest in my academic studies. Thanks to my family in China for providing me with the stories and the real experiences of corruption.

At last, to Lars "ett stort kärleksfullt tack" for keeping me going.

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Corruption Vocabulary

Abuse / Misuse of Function: Abuse of functions refers to a public employee or public office holder that is doing something which is illegal or something that the official has no legal authority to do, in order to obtain a personal economic benefit or cause an illegal damage to others. The United Nations Convention against Corruption (UNCAC) addresses the abuse of functions at art. 19. One sort of abuse of office is the misuse of information. That is, if an official, in reliance on information which she/he has acquired by virtue of her/his office, speculates on the basis of this information or acquires a pecuniary interest in any property, transaction or company which might be affected by such action or information or helps another to do any of these actions.

Collusion: Collusion is an agreement, usually secretive, which occurs between two or more persons to limit open competition by deceiving, misleading, or defrauding others of their legal rights, or to obtain an objective forbidden by law typically by defrauding or gaining an unfair advantage. It can involve an agreement among companies to divide the market, set prices, or limit production. It can involve wage fixing, kickbacks, or misrepresenting the independence of the relationship between the colluding parties.

Conflict of Interests: A conflict of interest exists when someone, such as a public official, has competing professional obligations or personal or financial interests that would influence the objective exercise of her/his duties.

Gifts: In the context of corruption, a gift is a financial or other benefit, offered, given, solicited or received with an obligation to provide any benefit in return. Gifts and hospitality may be corrupt, may be used to facilitate corruption, or may give the appearance of corruption. Gifts may include cash or assets given as presents, and political or charitable donations. Hospitality may include meals, hotels, flights, entertainment or sporting events.

Kickbacks: A kickback is a bribe to obtain an undue advantage, where a portion of the undue advantage is 'kicked back' to the person who gave or is supposed to give the undue advantage. The payment of kickbacks is a corrupt practice which typically occurs in connection with a public procurement process when a company pays a procurement officer to illegally award the contract to the company in return for a bribe.

Patronage: Patronage is a system in which political supporters are rewarded for their support, such as by being appointed to public office or receiving contracts, subsidies or other benefits.

Whistleblowing: A whistle-blower can be defined as an employee, former employee, or member of an organisation who reports misconduct to people or entities that have the power to take corrective action. It is recognised that whistle-blowers should be protected against retaliation in order to encourage the reporting of misconduct. In terms of international anti-corruption conventions, the protection of whistle-blowers is only covered by the United Nations Convention against Corruption (UNCAC). It should be noted, however, that this convention does not mandate the protection of whistle-blowers.

Source: Business Anti-Corruption Portal (Business Anti-Corruption Portal, 2014)

The mistake you make, don't you see, is in thinking one can live in a corrupt society without being corrupt oneself. After all, what do you achieve by refusing to make money? You're trying to behave as though one could stand right outside our economic system. But one can't. One's got to change the system, or one changes nothing. One can't put things right in a hole-and-corner way, if you take my meaning.

— George Orwell, *Keep the Aspidistra Flying*

1 Introduction

As a student of sustainability science, it is difficult to rethink sustainability in relation to corruption when living in Sweden, where grand and petty corruption is virtually non-existent. In Sweden, the discussion on sustainability often brings people a feeling of coziness. It is about community gardens, vintage fashion, citizen salary, organic food and public participation. It rarely happens that corruption becomes the center of discussion in the Swedish society. The discussion in China is often about renewable energy, food security, environmental pollution and rapid urbanization; and corruption plays a very important role undermining all efforts towards sustainability. China and Sweden differ greatly from each other in various international corruption rankings. Sweden is ranked the 4th least corrupt country in the world after only Denmark, New Zealand and Finland by Transparency International's Corruption Perception Index 2013 while China is ranked as the 80th out of a total of 175 countries (Transparency International, 2013). Swedes do not consider corruption a serious problem in society but rather as an exception when it does occur (Business Anti-Corruption Portal, 2013b). In contrast, corruption permeates in all levels of Chinese society and encountering various forms of corruption is almost unavoidable (Business Anti-Corruption Portal, 2013a). The argument for sustainability in China would be weak and problematic if one could pay bribes to get a "license to pollute" or if a construction company could ignore safety and environmental standards by giving a government official and his family a trip abroad. If we understand the issue of corruption and its impacts on Chinese society, then we will understand the more important issue, how to overcome corruption in order to be sustainable.

Growing up in a small village in China, I witnessed how villages and country life has changed both in good ways and bad ways. Villagers have more money to build big houses because nowadays they can find better-paid jobs in big cities. Many young people have moved to cities to get jobs as construction or factory workers, leaving their elderly parents and small children behind. The countryside environment has also changed: big roads are constructed and nice villas are built. One of China's biggest chicken factories has moved its production to the village, providing the local farmers with thousands of jobs. However, the beautiful environment and the peaceful village life have also gradually disappeared together with this positive change. The air stinks with the smell of chicken dung and fodder; the river running through the village has turned into a dark yellow color and garbage is floating around in it; road traffic has multiplied and it is now too dangerous for children to play in the street. The same thing is happening to villages all around China, and you often hear from village governments that this is a price that is worth paying because villages need to develop and people want to have a better life. Xiong Peiyun, a well-known Chinese author, writes in his book-*My Village, My Country*- that identities

of many Chinese villages are disappearing together with lands and old-growth trees that are illegally grabbed and claimed by corrupt officials and greedy private companies(Xiong, 2011). For generations, the villagers have relied on the rice paddies and mountains, and buried their ancestors under the old growth tree. They often have symbolic and even spiritual meanings to the villagers(Xiong, 2011). There are statistics showing that millions of Chinese farmers have lost their land for the sake of village development, which is more often in the personal interests of local officials. A survey of 1,791 farmers across 17 provinces in China conducted by Landesa Rural Development Institute, Renmin University and Michigan State University shows that about 4 million rural Chinese experience land grabbing by the local governments every year. Land disputes between rural Chinese and the governments are not uncommon, 65% of the 187,000 mass conflicts in China in 2010 stem from this type of disputes (Landesa Rural Development Institute).

Corruption and interests in economic growth do not only affect rural livelihood but also has many detrimental effects on Chinese cities. China's urban population surpassed its rural population for the first time in history in 2011 when reaching 690 million(Zhou, He, & Williams, 2012). China's massive urbanization has resulted in a booming of urban housing and infrastructure. Consequently, crowded infrastructure systems burdened by an increasing urban population and severe environmental problems like air pollution have become the main challenges for Chinese cities. Another worrying but often hidden issue is that urban housing and infrastructure have been built to poor quality due to corruption. In July 2011 alone, 4 bridges in different Chinese cities collapsed due to poor construction quality. Public procurement for urban housing and infrastructure is often non-transparent and bribes are often demanded from each subcontractor in a long supply chain, leaving only a very small budget for the cheapest labor and inferior construction materials(Lewis, 2011; Portal, 2013a). To further tackle intensive energy demand and the deteriorating environment, the Chinese government invested huge amounts of money into developing hydropower plants, such as the Three Gorges Dam. Corruption tainted the project in various ways, such as forced evictions, the misuse of resettlement funds by local officials, and safety concerns due to low quality construction (COHRE, 2002; Gittings, 1999). Many environmental concerns have also surfaced along this ambitious hydropower project, such as the deterioration of the Yangtze River ecosystem, threatening the lives of some very rare and valuable Yangtze River dolphins(Sample, 2007; UN-HABITAT, 2007).

In recent years, the Chinese government has envisioned an urban future with energy efficient buildings or so-called eco-cities, and this is the context which I will focus my study on in order to discuss the problem of corruption in relation to sustainability. During the research, I found that many of the eco-cities in China have either failed to meet the original objectives of eco-cities or

have moved in a somewhat different direction (Chang & Sheppard, 2013; Pow & Neo, 2013). Chinese eco-cities have more or less been built into expensive suburban housings that are only affordable for the rich Chinese; therefore, many of them became so-called ghost cities, standing empty with unused wind turbines and solar panels (Qi, 2012). It is suggested that there is often a lack of appropriate consideration over how to attract people to settle down in those cities, through for example employment or other types of economic activities(Qi, 2012).

What really interests me in China's eco-city development is the interaction between private developers and public officials as well as how they influence the way eco-cities are going to be built. Their interactions are complex, from private developers' purposeful arrangements with officials for economic gains, to an internal power struggle within the Communist Party and city governments for advancing their political career. This interaction is particularly present under China's current trend of city development which highlights capital investment as well as economic growth and encourages private developers to collude with officials in order to reach their respective goals. It is even more important to study their interactions within the environment of corruption in China because corruption is necessary for them to achieve their goals. As a result of their interaction, more corruption is created to reinforce the system of corruption, which undermines sustainability.

The central research questions may thus be articulated:

- 1. Why are eco-city projects in China so vulnerable to corruption?*
- 2. How does corruption undermine sustainability in the context of China's eco-city development?*

2 Methodology

2.1 Critical Theory

Critical theorists believe that there is a socially-constructed reality, and our way of understanding reality is not independent from ourselves(Denzin & Lincoln, 2000). The definition indicates that what we know about the world is inevitably influenced by our own interpretation. There are two reasons why this study is informed by critical theory. First of all, critical theorists try to challenge guiding assumptions(Denzin & Lincoln, 2000). In my study, I try to question the idea of eco-cities by first presenting the historical development of the concept based on Richard Register and then studying how eco-cities are built in China from a different approach which is both vulnerable to corruption and weak in terms of sustainability. During my

research, I am aware of my role as a researcher and my own interpretation on what corruption is. My experiences from working with corruption research and living in China have not only influenced the way I classify corruption but also my belief in studying corruption as an important aspect of sustainability. This is important for qualitative research because the resources we use to engage in meaning-making activities are influenced by whatever particular set of institutions and social relations a given human being is born into (Lankshear & Knobel, 1997).

Secondly, it is important for critical theorists to describe research approaches or ways of seeing in order to foster accountability (Denzin & Lincoln, 2000). For example, research on corruption faces potential difficulties due to its sensitive nature, which is also what I encounter during my research regarding interviews. Therefore, it is important to recognize the limitation this problem underlines for my study and constantly reflect on my own understanding of corruption and my selection of sources needed for the study. They could be the ideologies or understandings of the subject acquired before deciding on the research topic. This pre-knowledge influences how the research subject is being studied. My perception of and interests in corruption issues have also motivated me to look at the impacts of corruption on eco-city development in China as well as the link between corruption and the urban development strategy, which is inspired by the idea of green capitalism and guided by neoliberal planning.

2.2 Research Strategy

In order to answer my research questions, I choose to look at one particular eco-city project, Dongtan eco-city located in Shanghai. The project has received a great amount of attention within and outside China because of its ambitious plans and the complete suspension, partly due to official corruption in Shanghai government. Case study is an appropriate research strategy because I want to understand how corruption affects eco-city development in China. Dongtan Eco-city project is a good example illustrating why eco-cities in China are so vulnerable to corruption and what kind of impact corruption has on their developments. Case study therefore allows me to look closer at this project in order to answer my research question. The technical characteristics of case study, including data collection based on multiple sources of evidence and the prior development of theoretical proposition (Yin, 2009), also determines why case study is most suitable for my research. I will use multiple resources from academic literature, news articles, blogs, reports, policy documents, and secondary macro-level data. Regarding theoretical proposition, Green capitalism will first be used as a theoretical entry point for understanding why eco-city development has emerged so quickly in China supported by the national and local government. The power struggle and conflict of interests that are found in the capitalist

corporate culture also allow me to pay special attention to different actors, such as governments and private businesses involved in this project, and to study their interactions.

The theoretical framework combining green capitalism, corruption and neoliberal planning is useful in explaining the general trend of eco-city development in China; and more importantly, it offers some new understandings of why the project is particularly vulnerable to corruption. To put it simply, the interaction can be explained through a causal loop in which corruption facilitates the realization of the eco-city planning strategy which is derived from neoliberal thinking. The neoliberal planning strategy intensifies intercity competition which in turn increases the likelihood of corruption as a result of public and private actors seeking economic gains through illegal activities. The existing conceptual scheme of green capitalism, corruption and neoliberal planning serves as my general proposition while the case study of Dongtan eco-city serves as an empirical venue for applying the framework. This type of case studies is “fitting” or “theory-confirming” with a descriptive nature (Moses & Knutsen, 2012). In short, I will use Dongtan eco-city as an example to show how eco-city projects in China are being developed within the environment of corruption and under the guidance of the urban planning based on the neoliberal and entrepreneurial approach.

2.3 Methods of Collecting and Analyzing Data

It is important for me first of all to state that research on corruption faces several obstacles in terms of data collection. My initial idea was to conduct qualitative interviews with local government agencies and companies that were involved in the Dongtan eco-city project, Transparency International in China, a member of Transparency International in Berlin who has a particular interest in corruption prevention in the urban context, and two journalists who have reported corruption in the Dongtan eco-city project. However, most of the replies I received indicate that they are either reluctant or unable to participate in the interview. Some have not replied during the time of writing. It is probably because that corruption is a sensitive subject and Dongtan eco-city was suspended several years ago. Therefore, the most feasible method for collecting the data needed for my research is to combine the review of media publications and journal articles with secondary data analyses. The literature review is based on keyword searches in both English and Chinese in Lund University LUBsearch, Chinese universities database and Google search intending to be as exhaustive as possible.

Academic literature is a great source for this study since there are many researchers who conducted field trips to Dongtan eco-city. I must also mention the importance of using non-academic sources such as blogs and news articles because internet has become a very important platform for Chinese citizens to reveal and discuss corruption. According to a report published

by Freedom House, China has the world's largest number of internet users and their increasing activities through microblogs and other types of social media have made suppression of information difficult despite tightened control from the government (Freedom House, 2013). Sensitive issues such as corruption are often expressed on blogs and micro-blogs among Chinese netizens because of its remote and anonymous nature (Freedom House, 2013).

In order to analyze the level of transparency within public and private sectors as well as the capacity of the institutions that oversee corruption and ensure transparency, secondary data from Transparency International, the Bertelsmann Foundation, Global Integrity, and the World Economic Forum will be used. I selected only the data for China and created several summaries in the format of table figures (see Figure 1, 2, 3, 4). The secondary data is not only quantitative, e.g. Transparency International and the World Economic Forum, but also qualitative, such as Global Integrity and the Bertelsmann Foundation. They all serve a purpose of identifying corruption risks within the public and the private sector as well as the effective supervision of corruption by civil society groups and the public.

2.4 Originality and Relevance of the Study

The idea of studying corruption in relation to sustainability has long been recognized as important. During the ADB-OECD Anti-Corruption Initiative for Asia and the Pacific Regional Seminar on Political Economy of Corruption held in Manila, the Philippines in September 2009, Huguette Labelle, Chair of the Board of Directors at Transparency International expressed the urgent need to address corruption and its potential risks on sustainable development. The speech below from Huguette Labelle indicates that our sustainable development agenda is threatened by private interests for personal gains; and this is also what I want to emphasize in this study.

“At present, the issue of climate change is creating new momentum for action on the sustainable development agenda. The unsustainable use of our natural resources, our land and our overall environmental deficit may stem from a lack of expertise, neglect or short-sightedness, but it is also derived from greed, state capture for personal gain, politicians and public servants with price tags, and inspectors and license providers willing to look the other way in exchange for a bribe (Labelle, 2009, p. 3).”

Regarding corruption and urban development, there are two studies I would like to mention here. First of all, Dieter Zinnbauer, who works with emerging policy issues for Transparency International, calls on sustainable urban development practitioners to unite anti-corruption into their visions (Zinnbauer, 2013b). His concerns are valid, especially when considering that

corruption can have detrimental effects on the work of planners, architects and designers and undermine their sustainability efforts.

“Urban planners, architects and designers usually do not view corruption as a central issue to systematically explore and address in their work....To put it somewhat provocatively: at best, corruption might be mentioned in passing as one of many factors to consider when upgrading urban systems of governance, thus in essence denying its central importance and leading to misplaced priorities and unrealistic expectations for urban development(Zinnbauer, 2013a, p. 27).”

Secondly, among many discussions of sustainable urban development in relation to climate change adaptation, Christine Wamsler outlines several distinctive urban economic and political features that can potentially affect the overall urban resilience and city governments' ability to cope with frequent occurrences of natural disasters and adapt to climate change. One of the economic and political features she mentions in the study is control power, which means, according to her, control of compliance with legal frameworks(Wamsler, Brink,Claudia, 2013). Corruption is also mentioned in Christine Wamsler's book- *Cities, Disaster Risks, and Adaptation* (Wamsler, 2014) as a potential risk undermining sustainable urban development. However, in-depth study on this issue is not present in the book. It is clear to me that corruption is an urgent issue which needs to be addressed in great detail if we wish to take sustainable development seriously.

In terms of methodology, the relationship between corruption and sustainability has been largely studied from a quantitative standpoint through the analysis of macro-level data sets such as Corruption Perception Index (CPI) from Transparency International and sustainability measured by the Environmental Sustainability Index (ESI) and growth in genuine wealth per capita (Aidt, 2010), (Morse, 2006). In contrast, my study will provide a new way of approaching and understanding the impacts of corruption on urban sustainability by analysing and describing how corruption emerges in China within the environment of neoliberal urban development. More importantly, how this environment in turn opens up windows for more corruption; such opportunities are needed to reinforce the culture of collusive public and private relations. I will base my study on both academic and non-academic sources produced by researchers, organisations, governments, journalists as well as the general public. This method meets the objectives of transdisciplinary research (Lang et al., 2012) as I draw voices from different actors in the society.

2.5 Limitations

First of all, the sensitive nature of corruption limits the opportunities for me to collect first-hand data that could have potentially contributed to my study. Interviews with various actors

involved in the project could offer some great insights into the project and allow me to discover new aspects that are different from the existing studies and specially tailored to answering my research questions. It is unfortunate that my study cannot exceed this limit due to the time and scope offered for the study and the difficulties I faced when contacting potential interviewees. However, as knowledge is socially constructed, a critical view of knowledge is important if one wishes to approach the limitation of a research constructively (Moses & Knutsen, 2012). One should be critical of first-hand data just as much as secondary data because everyone involved in data production applies their own ideology that is already in place prior to the beginning of the research. More importantly, I study how corruption affects urban sustainability by applying the existing theoretical frameworks on my chosen case. Even if the actual data related to the case is not first-hand, my analysis based on the frameworks contributes not only new but also important information to a wider discussion of corruption in China's current urban development. Secondly, I also recognize the potential risk of using non-academic sources, such as blogs and news articles due to their non-scientific nature. However, I would argue that blogs and news articles are great sources for my study not only because of Chinese citizens' increasing engagement with social media, but also their remote and anonymous nature which provides a safer platform for the people to discuss sensitive issues like corruption.

Lastly, the concept of eco-cities is coined and developed in Europe and North America which emphasizes the protection of environment and local livelihoods in post-industrial cities. In this context, achieving sustainability through eco-city development entails compact, self-sufficient communities with minimal ecological impact, constrained economic growth, and orientation toward the locality, community participation and social equity (Chang & Sheppard, 2013). China, on the other hand, is a newly industrialized economy. Urbanization has just started in recent decades in the country and will continue for the next couple of decades. Eco-city development in China has mainly taken a neoliberal approach as shown in my case study. Socioeconomic policies also differ greatly between China and the Western world. China is a one-party politics with a relatively limited civil society tradition. To understand and evaluate eco city development in China based on the norms developed in a completely different socioeconomic context might at first sight seem problematic as "socioeconomic policies never produce 'pure' models against which others are to be judged (Chang & Sheppard, 2013)." However, it is precisely due to this great difference in socioeconomic contexts, it becomes more interesting for me to study how the idea of eco-city is transformed and realized in completely different ways in China. Therefore, it is less important to measure the degrees of deviation from a supposedly paradigmatic norm or perfect form which, in this case, is the ideal type of eco-cities based on the concept developed in the west. This approach is drawn from variegated capitalism, "a research paradigm that focuses on geographical differentiation across different spatial scales and places,

approaching capitalism as the representation and reconstruction of conjunctural processes comprising grounded political actions, institutional reinventions, and articulations with socio-regulatory transformations (Chang & Sheppard, 2013; Dixon, 2011).” Similarly, this study is focusing on how the idea of eco-cities is approached by the Chinese authorities and private actors with an intention to gain economic growth and career achievements as well as to increase cities’ competitiveness. More importantly, I want to analyze how corruption is making the aforementioned goals possible and, vice versa, how this type of eco-city development leads to the emergence of more corruption.

3 What is An Eco-City?

3.1 Historical Development of the Eco-City Concept

Eco-city movements began as early as in 1975 with eco-city pioneer Richard Register and his non-profit organization, Urban Ecology. As stated on the homepage of his organization, now called Ecocity Builders, “Eco-city utilizes ecological urban planning, design, ecology, education, advocacy, policy and public participation to build healthier cities — for both people and nature(Ecocity Builders, 2010b)”. At the beginning, many local projects that tried to implement the eco-city concept into practise were found mostly in Berkeley, California, the USA. Since 1990, the idea of eco-city has reached other countries, and the concept has also evolved. Interestingly, it has become important for eco-city practitioners around the world to recognize that there is no one-fits-all eco-city model (Ecocity Builders, 2010a). However, eco-cities share basic characteristics and are defined as:

“A human settlement modelled on the self-sustaining resilient structure and function of natural ecosystems. The eco-city provides healthy abundance to its inhabitants without consuming more (renewable) resources than it produces, without producing more waste than it can assimilate, and without being toxic to itself or neighboring ecosystems. Its inhabitants’ ecological impact reflects planetary supportive lifestyles; its social order reflects fundamental principles of fairness, justice and reasonable equity(Builders, 2010a).”

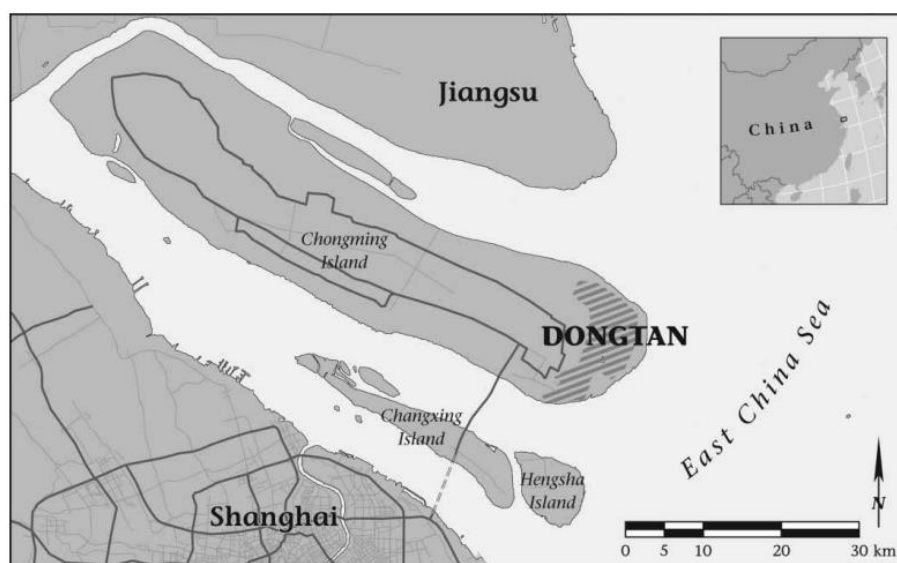
The eco-city concept is strongly influenced by other studies as well. Roseland’s study on the eco-city concept in theory and practice found that eco-cities are situated in a complex array of relevant variations, including sustainable development, sustainable urban development, sustainable communities and cities, bioregionalism, community economic development, appropriate technology, social ecology, and the green movement(Roseland, 1997). Going beyond the theoretical understanding of eco-cities, many international organizations and governments have begun to offer practical guidance for building eco-cities. Eco2 Cities is an

initiative from the World Bank Urban and Local Government Strategy, aiming to help cities in developing countries to achieve great ecological and economic sustainability. “Eco2 city builds on the synergy and interdependence of ecological and economic sustainability, and their fundamental ability to reinforce each other in the urban context (The World Bank, 2010).” The definition indicates that innovative cities can achieve great economic sustainability from a much smaller and renewable resource base. Other practical guidance for sustainable urban development in general, such as the SymbioCity (Ulf Ranhagen, 2012) approach from Sweden and the Reference Framework for European Sustainable Cities (RFSC) (RFSC, 2012), share very similar characteristics with the concept of eco-cities defined by Richard Register and Roseland. In short, the eco-city aims to create an urban future in which urban growth is made compatible with ecological and social sustainability.

3.2 Eco-City Development in China

Eco-city development in practice is relatively new to China although since the 1970s the Chinese government has recognized the importance of sustainable urban development. In 1971, China participated in UNESCO’s *Man and Biosphere Program* when interdisciplinary approaches to management, research and education in ecosystem conservation and sustainable use of natural resources were promoted. Interdisciplinary research on urban ecosystems began in 1978 in China, and since then sustainable urban development has always been on the political agenda (Niu Fengrui, 2009). In December 1984, China hosted the first national conference on urban ecology in Shanghai, and in 1986 Yichun City in Jiangxi Province became the first Chinese city to put the eco-city concept into practice. In May 2003, the Ministry of Environmental Protection in China drafted the *Targets for Eco-county, Eco-city, and Eco-province Development* (生态县、市、省建设指标(试行)), which defines three key objectives of eco-cities as economic, ecological, and social development (Niu Fengrui, 2009). Other national government agencies that set political agendas for developing eco-cities are the Ministry of Housing and Urban-Rural Development and the National Development and Reform Commission. China’s urban population surpassed its rural population for the first time in history in 2011 when the urban population reached 690 million (Zhou et al., 2012). Consequently, crowded infrastructure systems burdened by an increasing urban population and severe environmental problems like air pollution have become the main challenges for Chinese cities. Therefore, building low-carbon eco-cities may appear to be the key to addressing those challenges. Until February of 2011, China had 230 cities that had proposed to establish themselves as “eco-cities,” accounting for 80.1% of the total 287 cities at the prefecture-and-above level nationally. Of those 230 cities, 133, or 46.3%, had established targets to develop specifically as “low-carbon cities” (Zhou et al., 2012).

Dongtan eco-city, my case study, was located at the east end of Chongming Island in the mouth of the Yangtze River north of Shanghai (See Picture 1.). Dongtan eco-city was a Sino-British project started in 2005 to create a compact city with a 60 percent smaller ecological footprint compared to a conventional city, 66 percent reduction in energy demand, 40 percent energy use from bio-energy, 100 percent renewable energy use for buildings, on-site transportation, 83 percent reduction of landfill waste, and almost no carbon emissions(Chang & Sheppard, 2013). Actors involved in the project are the Chinese and British governments, Arup (a London-based transnational engineering and design company), the Shanghai Industrial Investment Company (a public-private pharmaceutical and real-estate company in Shanghai), universities, planning institutions, and many real-estate development consulting firms(Chang & Sheppard, 2013). However, the project was indefinitely postponed in 2008 and considered a failed project by local government officials and planners(Chang & Sheppard, 2013). Many of the buildings have never been materialized, yet local residents were removed at the beginning of the project in order to clear land for building the city (Larson, 2009; Sanford, 2010). There are many factors that contributed to the suspension of the project. First of all, former Shanghai mayor also a strong supporter of the project, Chen Liangyu, was charged of corruption and removed from his position (Danish Architecture Centre, 2014; Chang & Sheppard, 2013; Larson, 2009; Sanford, 2010). The actors involved withdrew from the project because it had become a “political issue(Pow & Neo, 2013)”. Secondly, this massive project on Shanghai’s last extant wetland, home to rare migratory birds, was controversial from a nature-conservation point of view (Larson, 2009). Thirdly, there was a lack of convincing solutions to realize the ambitious environmental targets (Sanford, 2010). Last but not least, it was not considered profitable by many investors as the city was located on an island that is far away from the metropolis of Shanghai without any land transportation before 2010(Chang & Sheppard, 2013).



Picture 1: Dongtan Eco-City, Shanghai, China. Adopted from (Chang & Sheppard, 2013)

4 The Theoretical Frameworks: Green Capitalism, Corruption, and Neoliberal Planning

4.1 Green Capitalism

The theory of green capitalism implies two core aspects: economy and environment; to put it simply, green capitalism refers to “a set of faiths that more sustainable futures can be secured via capitalist investment and entrepreneurial innovation(Scott Prudham, 2009)”. The concept of green capitalism applied in the context of eco-city development can be understood through sustainable entrepreneurship which “seeks to use a different kind of enterprise organizing logic as a tool for perpetuating resources involving enterprise design focused on sustainable development(Gibbs, 2009)”. As mentioned earlier, eco-cities utilize energy-efficient technologies and innovative thinking to build an environmentally, economically and socially sustainable living environment. Therefore, eco-city development provides sustainable entrepreneurs, for instance, clean technology enterprises and architecture firms with a strong focus on sustainability, opportunities to develop.

Many cities around the world have started to pay special interests in branding themselves a livable, fast-growing and innovative city as seen in many Scandinavian cities such as Copenhagen, Malmö and Stockholm. It is said that this type of city branding creates very positive city images and attracts investment(Stefan Anderberg, 2013). Cities that have been successful in their branding strategies also tend to export their models abroad. One example is the city of Malmö in Sweden which became sister cities with a Chinese city, Tangshan. I attended several events hosted by the city of Malmö during the visits by their Chinese partners. The Chinese side was here not only to learn from the experiences of the sustainable housing projects in the area of Västra hamnen but also to meet their potential business partners who were eagerly hoping to enter the Chinese market. Companies producing clean technologies consider China a very important market because of its interests in developing sustainable cities.

The need for Chinese cities to become more sustainable also derives from the fact that they have been blamed for exploiting the environment. Air and water pollution as well as lacking food safety threaten Chinese urban population and scare foreigners away, especially last year when many major cities like Beijing and Shanghai experienced the worst type of hazardous air pollution. A 2012 survey by the American Chamber of Commerce in China showed that 36 per cent of 244 companies experienced difficulties recruiting senior executives because of air quality issues - up from 19 per cent in 2010(Ng, 2013). With the increasing environmental crisis cities are facing, the Chinese government has begun to reconsider cities the hope for resolving the crisis and sustaining growth. Correspondingly, to develop eco-cities has appeared as a solution.

There are several reasons for a strong government support behind eco-city development in China. First of all, under the pressure from China’s recent environmental movements (Zhang Chun, 2013; Ramesh, 2007), the government has seen a need to ensure social stability by addressing environmental issues. Secondly, the political legitimacy of the Chinese government is gained mainly through sustaining economic growth(Fulong, 2003), and the environmental crisis that China is now facing threatens this development in many ways. One of the direct consequences is the discouragement of foreign investment as pointed out earlier. Thirdly, the Chinese government also sees an urgent need to showcase their environmental efforts and restore the country’s image in the face of growing critique against its depressing environmental track record(Pow & Neo, 2013). As a result, flagship projects like Dongtan Eco-City have appeared to show the government how they can transform the restless urban landscape through a series of extravagant place-marketing campaigns and image-building projects that imitate western urban design(Pow & Neo, 2013).



Picture 2: Screen capture of the official government portal of Beijing.

Different city governments around China are also making their efforts to attract foreign investors through vivid city images showcasing themselves as green and liveable cities. Beijing is making a great effort to restore its imagine of an ancient city not only rich in culture but also clean. What people see on the website are beautiful pictures of the Summer Palace and Beihai Park with plum blossoms and people boating on a clear blue lake instead of wearing breathing masks on their way to work (see Picture 2). Xiamen, the sub-provincial city of Fujian Province located on the southeast coast of China, has been nominated several times as China’s most liveable city. Its official government portal shows that the city of Xiamen with its already well-known clean environment has to do something more than just have a clean coastline with palm

trees. For example, what the Xiamen government calls “*Rich Citizens; Beautiful Environment* 百姓富，生态美” is a strategy for encouraging residents from suburbs and close-by villages to grow flowers, vegetables and fruits that will later be sold in the city. This strategy is considered by the government a way to sustain economic growth and improve Xiamen’s city environment (see Picture 3).



Picture 3: Screen capture of the official government portal of Xiamen.

4.2 Corruption

Green capitalism is not only a useful theory for understanding the current booming eco-city projects in China, but also for understanding why the idea of sustaining economic growth emphasized by the majority of eco-city developers also implies risks of corruption. Capitalist corporate culture commonly found in the neoliberal economic system is a breeding ground for corruption(Girling, 1997). The ultimate goal of capitalism, which is to achieve economic gain, drives public and private actors to collude with each other as a way to seek solutions to their conflicts of interests. Girling describes the structural condition of corruption through three stages where corruption is developed.

At the first stage, there exists a structural incompatibility between economic and political interests, public and private, as well as the contradictory meaning of modernity(Girling, 1997). According to Girling, political interests are in principle to safeguard public interests in a democratic system while economic interests are to achieve material gains; the difference between them results in a certain degree of disagreement or incompatibility(Girling, 1997). However, before the economic reform in China, this separation between the public and the private was not great enough to create any incompatibility since private economy did not play

any significant role(Yao, 2002). Chinese economy at that time was under state control and market competition was virtually non-existent. Historical evidence shows that economic development result in the reorganisation of economic and social systems, which leads to social complexity and tends to breed corruption(Ramirez, 2014). This process is particularly pronounced in transition economies like China because it has undergone a rapid institutional change.

Several studies show that decentralisation, one of China's institutional reforms, has induced competition among local officials and incentivized them to foster economic growth through corruption (Ip & Law, 2011; Yao, 2002). Since the economic reform in 1978, ways for government officials to benefit themselves are no longer limited by what they are entitled to receive based on their ranks and status that existed before the reform. New opportunities have opened up in front of them, and they also see the need to utilize their political power for greater personal gains in order to compete with private businessmen who have accumulated much wealth and become extraordinarily rich since the reform. This process is made possible by officials' administrative monopoly over virtually all sectors, from electricity, telecommunications, and mass transportation to higher education, health care and publication(Ip & Law, 2011). Therefore, in the Chinese context, what Girling defines as "incompatibility(Girling, 1997)" between public and private could be more appropriately defined as the need for the private sector to grow and the bureaucratic hurdles resulted from the public officials' administrative monopoly.

The second stage, a need for collusion between politicians and businessmen appears in order to overcome this incompatibility(Girling, 1997). As mentioned earlier, local governments have the incentives to foster economic prosperity, establish entrepreneurship, and promote rapid economic growth due to China's decentralization policy. Private businesses need to exist in order to achieve those goals; excessive bureaucracy could potentially discourage the development of the private sector. However, local officials can exploit their entrenched administrative monopoly and offer abusive competitive advantages for companies through, e.g. kickbacks (Ip & Law, 2011). Consequently, power cohabitation with capital and rent-seeking opportunities has created crony capitalism between officials and business people (Dai, 2010; Ip & Law, 2011). In contrast, ever widening income gaps between the poor and the rich fuels the public resentment, and deteriorating environment threatens public health, leaving a majority of the Chinese people victims of the country's modernization.

The third stage, according to Girling, is the occurrence of corruption when private interests prevail(Girling, 1997). Under a democratic system of checks and balances, corruption occurs as

an exception; while in China, corruption permeates all levels of society. This is also supported by my data in Section 5 as the Transformation Index from the Bertelsmann Foundation gives the lowest score to China in terms of the separation of power in the public sector, indicating that China lacks a system of checks and balances (See Figure 1). The systemic corruption is reinforced by the lack of separation between officials and businesses (Yao, 2002). The increasing interaction between officials and businessmen in China, mostly through government officials owning businesses or shares of businesses, can be seen as a way of reinforcing this system of collusive culture. In order to further understand why the concept of green capitalism creates a certain type of eco-cities that are not only vulnerable to corruption but also weak in terms of sustainability, Dongtan eco-city will be used as an example in the later discussion.

4.3 Neoliberal Planning

The concept of neoliberal planning is useful for understanding what challenges and contradictory processes for planning institutions and organizations. Neoliberal planning emphasizes “a planning process based on neoliberalization which manifests itself in an urban context through a prevailing pattern of marketization, market-oriented regulatory system, and entrepreneurship (Tasan-Kok & Baeten, 2012)”. Instead of the conventional planning approach with strong state intervention and regulation, neoliberal planning adopts a more flexible regulatory system which allows private actors such as capital holders to take part in urban development through large capital investment (Tasan-Kok & Baeten, 2012). Cities around the world are beginning to normalize neoliberal planning, and in Asia in particular, this approach has become increasingly popular (Tasan-Kok & Baeten, 2012). Neoliberal planning strategies adopted by the government of Shanghai is determined by the historical development of Shanghai’s relationship with other Yangtze River Delta Region (YRDR) cities as well as other mega cities in China, which is characterized by an increasing intercity competition for capital investment.

For many decades, Shanghai has been on the forefront of industrialization due to its historical legacy as China’s gateway and its educated labor force. Since the 1990s, other cities along the YRDR such as Nanjing, Hangzhou, and Suzhou have also begun to develop and transform into the main manufacturing center of China and the world (Zhang, 2006). Shanghai lost its role as the manufacturing center due to the development of the other YRDR cities; therefore, the government has seen an urgent need to upgrade its development strategy in order to continue to attract foreign investment (Zhang, 2006). In addition to that, other mega cities like Beijing, Guangzhou and Shenzhen are also competing with Shanghai to become important actors in the national and global economic landscape (Xu, 2008). One core strategy is to develop Shanghai into a service center, including banking, consultancy, information technology et al (Zhang, 2006).

Moreover, mega projects such as hub airports, high-speed trains and huge convention centers are symbols for top-level international status and used to lure foreign investment (Douglass, 2002).

Faced by the increasing criticism against Chinese cities' environmental condition, Dongtan eco-city was considered by the government of Shanghai a flagship project to showcase Shanghai's ambition to become a sustainable city (Pow & Neo, 2013). Other economic benefits Dongtan could bring to the region were employment generation from e.g. a research center for sustainable development, new investment and local spin-off businesses; and this is particularly in the interests of government officials due to China's personnel-promotion mechanism which binds a city's GDP performance to local officials' promotion (Zhang, 2006). To conclude, if we understand under what circumstances different challenges are being created as well as what kind of challenges and how different actors cope with the challenges in Dongtan eco-city, then we will understand the more important issue, that eco-cities in China that are inspired by the concept of green capitalism and supported by neoliberal planning strategies will likely be tainted by corruption, which in turn would undermine the true objectives of eco-cities.

5 Level of Corruption in China

Corruption is often categorised into three different types according to size and severity (Business Anti-Corruption Portal). Petty corruption is small scale corruption which often involves individuals while grand corruption is larger in scale and often found in a larger political, legal, and economic context. Systematic corruption is endemic corruption in a whole society caused mainly by the weakness of governing organisations (Business Anti-Corruption Portal). It is said that systematic corruption occurs often in post-soviet states where over-centralized power, low pay, and a culture of immunity have altogether caused systematic corruption (Haller & Shore, 2005). In order to illustrate the level of corruption within the public and private sector in China as well as the effectiveness of civil society groups and citizens to oversee corruption and ensure transparency, I have created a summary of individual indexes that are widely used for accessing a country's corruption level. Furthermore, it is necessary for me to introduce the concept of relationship-building, also known as *Guanxi* (关系), which is a very common practice in China involving gift giving, banqueting and other similar types of interaction used for showing respect. Different practices for building up *Guanxi* with Chinese people are highly unregulated and leave many loopholes for corruption, posing potential threats to sustainability efforts.

It is widely known in China that relationship or connection is almost the single most important factor for success in China, e.g. in business and employment (Lu, 2013). Historically, Chinese

commerce was “largely unregulated by formal law and was intensely relational (Lubman, 2006)”. Therefore, *Guanxi* has always functioned as a substitute for a more formal legal system and enforcement mechanism. Due to the importance of *Guanxi*, Chinese people dedicate a lot of time and energy in building a solid network of family, friends, and acquaintances. Foreign businessmen who wish to become successful in doing business with Chinese people also adapt to *Guanxi*. The Chinese legal framework is not strong enough in regulating this type of corruption and leaves much room for people to gain benefits through *Guanxi*. In China, the criminal threshold for investigation of individuals for bribery remains at RMB 10,000 and for entities is at RMB 200,000 , according to *the Interpretation of Several Issues Concerning the Application of Law for Handling Criminal Cases of Bribery* by the Supreme People’s Court and the Supreme People’s Procuratorate (Clifford Chance, 2013). This means that companies or individuals who offer bribes lower than these numbers will not be investigated by the criminal justice system in China except some specified circumstances, e.g. causing severe damage to national/social interests. The Anti-unfair Competition Law in China also provides regulation on *Guanxi*- related gifts and hospitality to some extent, but the enforcement is usually poor (“Global Integrity Report,” 2011).

Level of corruption in the public sector

Transparency International

1. Global Corruption Barometer: general public survey on the perception of corruption
2010/2011 data: 52% surveyed citizens consider public officials and civil servants corrupt or extremely corrupt.
 2. Corruption Perceptions Index: experts and businesses survey on the perception of corruption in the public sector
2013 data: score 40 on a 0 (highly corrupt) - 100 (very clean) scale ; ranked as 80th out of 177 countries, representing a low level of transparency.
-

The World Bank Group: Worldwide Governance Indicators 2012

1. Control of Corruption: Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
2012 data: score 39 on a 0 (lowest control of corruption) - 100 (highest control of corruption) scale.
-

The Bertelsmann Foundation: Transformation Index 2014

1. Separation of powers: score 1 on a 1 (worst) - 10 (best) scale indicating a lack of a system of checks and balances
 2. Independent judiciary: score 2 on a 1 (worst) - 10 (best) scale indicating a severe political interference and high level of corruption
 3. Prosecution of official abuse: score 3 on a 1 (worst) - 10 (best) scale.
 4. Anti-corruption policy: score 4 on a 1 (worst) - 10 (best) scale indicating the ineffectiveness of anti-corruption policy.
-

Global Integrity Report 2011

1. Government accountability: score 46 on a 0 (very weak) - 100 (very strong) scale representing a very low level of government accountability.
-

Figure 1: Level of corruption in the public sector is a summary of individual indexes from Transparency International (Transparency International, 2010-2011, 2013), the World Bank Group (The World Bank, 2012), the Bertelsmann Foundation (The Bertelsmann Foundation, 2014), and Global Integrity ("Global Integrity Report," 2011).

Figure 1 shows that corruption in the public sector in China is a serious problem. Both the general public and experts/enterprises indicate very little trust in public officials and civil servants, according to Transparency International's Corruption Perception Index 2013 and Global Corruption Barometer 2010/2011. The World Bank's Worldwide Governance Indicator 2012 suggests that the control of corruption in China is low, as both petty and grand corruption are commonly exercised in order for the state and business elites to achieve private gains. The Bertelsmann Foundation's Transformation Index 2014 indicates that China's anti-corruption legal frameworks and agencies such as judiciary are ineffective since they are subject to political influences. The prosecution of corruption committed by public officials and civil servants is therefore low. Global Integrity Report based on qualitative data also shows a low level of government accountability in China.

Level of corruption in the private sector

Transparency International

1. Global Corruption Barometer: general public survey on the perception of corruption
2010/2011 data: 54% surveyed citizens consider business and the private sector corrupt or extremely corrupt.

The World Economic Forum: Global Competitiveness Index 2013-2014

2013-2014 business executives survey

1. Irregular payments and bribes: score 4 on a 1 (worst)-7 (best) scale indicating that businesses operating in China often face demand of irregular payments and bribes.
 2. Favouritism in decisions of government officials: score 4 on a 1 (worst)-7 (best) scale indicating that government officials in China often favour well-connected companies.
 3. Ethical behaviour of firms: score 4.2 on a 1 (worst)-7 (best) scale indicating that companies operating in China generally has a low level of corporate ethics.
-

Figure 2: Level of corruption in the private sector is a summary of individual indexes from Transparency International (Transparency International, 2010-2011) and the World Economic Forum (The World Economic Forum, 2013-2014).

The private sector is also hampered by corruption as indicated by several indexes (see Figure 2). Transparency International's Global Corruption Barometer 2010/2011 shows that more than half of the surveyed households consider business and private sector corrupt or extremely corrupt. Enterprise survey from the World Economic Forum shows that bribes and other types of irregular payments are often demanded from businesses that are operating in China, and companies have in general very low corporate ethics. The surveyed business executives also suggest that governments exercise favouritism towards well-connected companies indicating likelihood for companies to bribe government officials in exchange for their favouritism.

Effectiveness of civil society groups

The Bertelsmann Foundation: Transformation Index 2014

1. Civil Society Tradition: score 9 on a 1 (worst) - 10 (best) scale indicating a significant number of civil society organizations operating in China.
 2. Civil society participation: score 3 on a 1 (worst) - 10 (best) scale indicating a low level of civil society participation and a low capability to influence political decisions.
 3. Association and assembly rights: score 2 on a 1 (worst) - 10 (best) scale indicating a low degree of independent operation.
 4. Freedom of expression: score 2 on a 1 (worst) - 10 (best) scale indicating a highly restricted freedom of expression.
-

Global Integrity Report 2011

1. Free operation of anti-corruption civil society organizations : score 17 on a 0 (very weak) - 100 (very strong) scale indicating that anti-corruption or good-governance civil society groups cannot operate freely.
 2. Safety of civil society activists when working on corruption issues: score 33 on a 0 (very weak) - 100 (very strong) scale indicating that civil society activists are likely to face harassment or violence when working on corruption issues.
-

Figure 3: Effectiveness of civil society groups is a summary of individual indexes from the Bertelsmann Foundation (The Bertelsmann Foundation, 2014) and Global Integrity ("Global Integrity Report," 2011).

The Bertelsmann Foundation’s Transformation Index 2014 indicates that China has in fact a significant number of civil society groups that are not only working with corruption issues but also environmental problems. However, the data shows that their effects are minor, and their existences remain at a superficial level. It is proven by their limited roles in decision-making and restricted freedom of association and expression. Similarly, Global Integrity Report shows that anti-corruption civil society groups cannot operate freely in China and are often subject to harassment and violence.

Effectiveness of citizen participation

The Bertelsmann Foundation: Transformation Index 2014

- 1. Association and assembly rights: score 2 on a 1 (worst) - 10 (best) scale indicating a restricted freedom of association and assembly.
- 2. Freedom of expression: score 2 on a 1 (worst) - 10 (best) scale indicating that the government has tightened the control of citizen’s freedom of expression on the internet, social media, and other mass communication technologies.
- 3. Social capital: score 5 on a 1 (worst) - 10 (best) scale indicating that citizens affected by severe problems such as environmental degradation and official corruption and their association for purposes of self-help have increased yet the government has also tightened the control.

Global Intergrity Report 2011

- 1. Media : score 30 on a 0 (very weak) - 100 (very strong) scale indicating that citizens' free discussion of corruption issues through mass media is restricted.
- 2. Public access to information: score 81 on a 0 (very weak) - 100 (very strong) scale indicating public rights to information is garanted by laws, but sometimes poorly enforced in practise, especially with regards to sensitive information.

Figure 4: Effectiveness of citizen participation is a summary of individual index from the Bertelsmann Foundation (The Bertelsmann Foundation, 2014) and Global Integrity("Global Integrity Report," 2011).

The Bertelsmann Foundation’s Transformation Index 2014 shows that freedom of association, assembly and expression is highly restricted for Chinese citizens. However, social capital in terms of association for the purpose of self-help when encountering severe problems such as environmental degradation and official corruption is very high despite the tightened control from the authorities. Global Integrity Report 2011 indicates that there are laws in place to guarantee citizens’ rights to information; however, the enforcement is poor in practice and it is often difficult for citizens to access sensitive information. Media environment still remains highly restricted; yet the number of internet users in China has increased dramatically and Chinese citizens continue to discuss corruption and share corruption-related news through blogs or microblogs(Freedom House, 2013). Freedom House’s Freedom of the Press 2013 report indicates that cases of violence against investigative journalists and high-profile online activities are decreasing over the years(Freedom House, 2013).

6 Discussion

6.1 Corruption and Eco-City Development

6.1.1 *Official Corruption and the Suspension of Dongtan Eco-City*

As mentioned in the theoretical framework section, China's decentralization policy under the socialist market economy has given administrative monopoly to local officials and induced incentives to corruption. The new cohabiting relationship has been established between local officials and private businesses based on public-private collusion in virtually all sectors for maximizing economic gains. In the case of Dongtan, the public-private collusion is visible in the corruption scandal involving former Shanghai mayor Chen Liangyu (陈良宇), who was a strong supporter of the project. Chen was charged for bribery and abuse of function and sentenced to 18 years in prison in April 2008. During his term as the Shanghai mayor, Chen took advantage of his position to help private companies gain favorable access to finance through the Shanghai Municipal Bureau of Labour and Social Security, putting 1 billion yuan of the social security fund at huge risk. One company that benefited from the misuse of the public fund is Shanghai Fuxi Investment Holdings, which later became the main shareholder of the Shanghai Road and Bridge Development Corp, a state-owned company belonging to Shanghai City Construction and Development Corp. The CEO of Shanghai Fuxi Investment Zhang Rongkun became a very close "friend" to Chen, and their friendship was mainly built on the supply and demand of bribes ("陈良宇案官商勾结图谱：国家资本造亿万富翁," 2008). Chen's favouritism towards Zhang and his company helped Zhang to beat Siemens, General Electric as well as General Motors and become the second biggest shareholder of Shanghai Electric. Similar relationships as that between Chen and Zhang is commonly found in China's socialist market economy, and it is characterised as collusion between government officials and businesses (Yao, 2002).

It is important for me to state here that I am not able to claim a direct connection between Chen's corruption scandal and the suspension of Dongtan Eco-City within the recourses available and the time provided for my research. However, Dongtan can be used as an example showing how official corruption could potentially affect the development of eco-cities in China. Dongtan was suspended indefinitely after Chen's arrest because the scandal involved a big number of actors from both public and private sectors, including Zhang, who had very significant share in the major companies that are responsible for the urban development in Shanghai. After Chen's arrest, many companies involved in Dongtan Eco-City withdrew from the project as the project had become a "political issue" (Pow & Neo, 2013). Supported by the data provided earlier, corruption risks in China are highlighted by a low level of government accountability in the public sector and a low level of corporate ethics in the private sector (See Figure 1 and 2).

This case is therefore a good example showing collusion between officials and businesses for the purpose of maximizing personal gains under China's socialist market economy that creates an environment with very high corruption risks.

6.1.2 Corruption Emerges under China's Socialist Political System and Market Economy

China's socialist political system inherited from the earlier communist regime is a crucial factor contributing to the creation of the absolute power within the hands of high-ranking officials, but even more importantly, it is the market capitalism adopted by China since the economic reform in late 1970s that actually creates opportunities for corruption(Yao, 2002). During China's marketization, a period of transition from communism to capitalism, great opportunities have opened up for both officials and private persons after "decades of thwarted economic interests and bureaucratic obstruction"(Girling, 1997). Politicians or public officials face inducement to make money fast while private businesses are facing inducement to seek illegal or informal ways to circumvent bureaucratic hurdles provided by the bribable public servants(Girling, 1997). As shown in my data, irregularities and informal rules are still dominant in China's business climate since governments often show their favoritism towards well-connected companies through the demand of bribes and other types of irregular payments (See Figure 2). Under a democratic system of checks and balances, corruption occurs as an exception; while in China, corruption permeates all levels of society.

Moreover, the systemic corruption is reinforced by the lack of separation between officials and businessmen (Yao, 2002). This is also supported by my data in Section 5 as the Transformation Index from the Bertelsmann Foundation gives the lowest score to China in terms of the separation of power in the public sector, indicating that China lacks a system of checks and balances (See Figure 1). The increasing interaction between officials and business people in China, mostly through government officials owning businesses or shares of businesses, can be seen as a way of reinforcing this system of collusive culture. In the case of Dongtan, Chen held absolute power over virtually anything that was needed for developing Dongtan since he was the Shanghai mayor as well as the Communist Party Chief in Shanghai(Dai, 2010). After Chen's arrest, he was charged with illegal issuance of land titles and land use permits to private companies and individuals("Former Shanghai Party chief gets 18-year term for bribery," 2008). Chen illegally issued 537 acres of land for construction purpose, and 183 acres of them were agricultural land; he and other alleged private businesses gained in total 1.18 billion Chinese Yuan(Xinhua News, 2008). Even though it is unclear whether or not the land approval for developing Dongtan was made possible by Chen's corruption, it is clear that he misused his function as the Shanghai mayor and the Party Chief in order to extract money and channel it into

his private pockets through illegal land title issuance and approval. Dongtan is therefore a good example showing how China's socialist market economy has given rise to official corruption.

6.1.3 Corruption Undermines Sustainability Objectives in Dongtan Eco-City

If Chen's corruption scandal did not have any impact on the development of Dongtan and the plan was actually materialized, how sustainable Dongtan would actually be is worth questioning. What is controversial about Dongtan is that it was to be built on Shanghai's last extant wetland, home for rare migratory birds(Larson, 2009). The construction of the City would also involve the conversion of agricultural land into commercial real estate development, which is prohibited under China's revised Land Administration Law(Pow & Neo, 2013). The revised Land Administration Law 1999 is a measure taken by the Central Government to preserve farmland in order to ensure China's continued capacity to produce adequate levels of staple cereals. The law also specifically addresses the protection of environmentally sensitive and agricultural land(Lichtenberg & Ding, 2008). Therefore, Dongtan eco-city would likely have failed to meet the objectives of eco-cities since it was to be built on fertile agricultural land needed for food production for millions of people living in the Shanghai metropolis. Except for a so-called integrated city with nature conservation designed by Arup (See Picture 4), there is a lack of clear and detailed plans for how they were going to preserve the natural landscape when constructing the city. Ironically, the plan to build the city was approved despite the regulations on the conservation of environmental sensitive and agricultural lands, and a group of experts and officials was formed to carry out the plan(Head & Castle, 2008). Therefore, the example of Dongtan shows how efforts for sustainability in eco-city development in China could be undermined by corruption. More detailed analysis of the social and ecological impact of Dongtan eco-city will be presented in section 6.4.

6.2 Guanxi: Small Favors but Detrimental Impacts

An interesting article featuring an interview with Robert Tincknell, the deputy managing director at Treasury Holdings (the €2bn Irish developer controlling the land for Dongtan Eco-City), shows that *Guanxi* facilitated the development of Dongtan. Robert Tincknell proudly explained during the interview how he, for over 3 years, had been trying to immerse himself in the Chinese culture and cultivate *Guanxi*. He and his family moved from Dublin to crowded Shanghai because he believed that cultivating *Guanxi* with Chinese people is a long-term commitment. As he puts it, "*Lots of guys fly over one time and expect to do transactions dead off the bat - but that's not going to work. You can't turn up once a year in Shanghai and expect to do a deal. It doesn't work like that; you have to work hard to cultivate relationships and you have to be on the ground*" ("BREAKING CHINA," 2006)." What seems strange to me is that he is coy about how it started and how he did in order to build up *Guanxi* with Chinese officials and

businessmen. He generally calls it an introduction and “a year and a half of banqueting, toasting, gan-bei-ing and glad-handing (“BREAKING CHINA,” 2006)”. This led to a good relationship with Shanghai Industrial Investment Corporation (SIIC), the property developer of Dongtan Eco-City and the mayor of Shanghai. In November 2004, the relationship paid off. Treasury signed an agreement with the Shanghai government and SIIC to be the 50/50 development partner for Dongtan (“BREAKING CHINA,” 2006).” Luckily for Treasury Holdings, it was not implicated in the sleazy scandal that toppled the Shanghai mayor and the party chairman Chen Liangyu, but he admits in the interview that informal connections with officials played a crucial role. The data from the World Economic Forum also supports the statement that a well-connected company wins governments’ favouritism, and bribes as well as other types of irregular payments, such as gift cards and dinners, are often demanded by government officials during relationship building (See Figure 2).

This type of corruption can sometimes have very detrimental effects on urban environment and society. The quality of many public projects is poor because a large amount of money is spent on inviting officials to expensive dinners, gift cards and sometimes even luxury trips, leaving only a very small budget for the cheapest labor and inferior construction materials (Lewis, 2011; Portal, 2013a). There are numerous reports on poor housing and infrastructure quality in China due to corruption. In July 2011 alone, 4 bridges in different Chinese cities collapsed due to poor quality (Lewis, 2011). Fair competition in a sound business environment is also undermined by this type of corruption; and even more worrying, this system will likely be reinforced since companies are encouraged or forced to offer irregular payments or other types of favors to build *Guanxi*. The Chinese government has also begun to realize that in order to effectively tackle the problem of corruption, excessive practice of *Guanxi* needs to be regulated. Newly elected president of China, Xi Jinping, is calling on officials and civil servants to adopt an austere lifestyle, and luxury vehicles and dining are now regulated under his new anti-corruption strategies (艾冰, 2012). As a result, cities like Hangzhou are closing down some expensive restaurants and hotels where official corruption often takes place and turning them into places with reasonable prices that are affordable for ordinary Chinese (宋如鑫, 2014).

6.3 Neoliberal Planning, Intercity Competition, and Corruption

This section discusses how neoliberal planning together with the need for Chinese cities to compete with each other for GDP performance have created an environment with high risk of corruption and helped to push forward the development of Dongtan, putting wetland ecology and social equity at a risk. To put it simply, the neoliberal planning strategy intensifies intercity competition which in turn increases the likelihood of corruption as a result of public and private actors seeking career achievements and economic gains through illegal activities. My findings

also reinforce my earlier statement that a strong focus on economic growth as a way to achieve sustainability in China promoted by green capitalism creates a high corruption risk environment and undermines many sustainability efforts. The following paragraphs will discuss what kind of neoliberal planning strategy was adopted for developing Dongtan, what challenges were created by the planning strategy, how different actors involved overcame the challenges, and what kind of impact their ways of overcoming the challenges have on corruption in China.

6.3.1 Dongtan Eco-City: A Neoliberal Planning Approach

A neoliberal planning approach is present in Dongtan eco-city because the project underlines several challenges, which is considered a very important aspect of neoliberal planning (Tasan-Kok & Baeten, 2012). Dongtan is a joint cooperation between the Shanghai Industrial Investment Corporation (SIIC), one of China's largest property developers owned by the Shanghai Municipal Government, a London-based architecture firm Arup, HSBC, and Sustainable Development Capital LLP (SDCL). Many other private property developers were also involved. The eco-city plan designed by Arup covered the whole area of 30 square kilometers with 100 percent renewable energy housing that was planned to host 400,000 people by 2050. Since Dongtan is located on Chongming Island, which has a significant coverage of wetland and fertile agricultural land, Arup's plan incorporated the landscape development with the natural wetlands in order to preserve the existing farming and irrigation system (See Picture 4). Peter Head from Arup stated in an interview that in order to be ecologically sustainable, Dongtan needed to be economically sustainable, by which he indicated that Dongtan should offer sustainable economic opportunities to attract investment and skilled labor (Head & Castle, 2008). Therefore, a core element of this strategy was to establish the Dongtan Institute of Sustainability, which would provide jobs like teaching, researching and services for the institution. Spin-off businesses were expected to grow around the institution, transforming the area into a place like Boston around the Harvard and MIT campuses (Head & Castle, 2008).



Picture 4: The visualisation of the aerial view of Dongtan Eco-City. Source: adopted from (Head & Castle, 2008).

Some important challenges encountered by neoliberal planning, such as conflict over land use and controversy over social equality (Tasan-Kok & Baeten, 2012), were also present in Dongtan eco-city. One of the contradictions in the neoliberal urban development system is land-use decisions in the hands of states and dynamic market mechanism in the hands of private actors (Tasan-Kok & Baeten, 2012). This conflict between governments and private property developers over land issues is well-manifested in Dongtan. The city was to be built on Shanghai's last extant wetland, home for rare migratory birds (Larson, 2009), such as the black-faced spoonbill (Head & Castle, 2008). The construction of the City would also involve the conversion of agricultural land on Chongming Island into commercial real estate development, which is prohibited under China's revised Land Administration Law (Pow & Neo, 2013). The project also involved a relocation of some local farmers for the purpose of land clearance (Larson, 2009). Another challenge involved in the neoliberal urban development system is social and economic inequalities caused by marketization initiatives (Tasan-Kok & Baeten, 2012). Expensive consulting fees paid to foreign architect companies like Arup to design Dongtan as well as advanced technologies that would later be installed in the city mean a higher development cost and higher housing prices (Cheng & Hu, 2010). Accompanied by a higher living cost in the suburbs of Shanghai, Dongtan would likely turn out to be an expensive residential area that would be unaffordable for the farmers of Chongming Island and other lower-income families. In addition, developing Dongtan was a top-down decision without any public consultation (Cheng & Hu, 2010); as a result, some farmers moved to Shanghai and got jobs like taxi drivers in order to clear land for the development of the city (Larson, 2009). Therefore, it would be difficult for

Dongtan to meet the fundamental principles of eco-cities that are “fairness, justice and reasonable equity(Builders, 2010a)”.

6.3.2 The Causal Link between Neoliberal Planning, Intercity Competition, and Corruption

In order to address the power relation being established between governments, planning professions and actors in the property industry in neoliberal urban development(Tasan-Kok & Baeten, 2012), Dongtan will be used as an example to illustrate how different actors involved in the project overcame the challenges and pushed forward the development plan. In the case of Dongtan in particular, the interaction between different actors can be explained through a causal loop (See Figure 5): corruption facilitates the realization of the Dongtan master plan supported by the concept of neoliberal planning; the neoliberal planning strategy intensifies intercity competition which in turn increases the likelihood of corruption as a result of public and private actors seeking economic gains through illegal activities.

First of all, different actors involved in Dongtan shared similar interests, which in short were economic gains and career achievements. Political patronage between China and the UK helped to establish the cooperation between SIIC and Arup. The signing ceremony between SIIC and Arup took place at Downing Street during the former President Hu Jintao’s visit to the UK. It is proven that the agreement became an important cornerstone in the UK-China relationship: former British Prime Minister Gordon Brown and former Chinese premier Wen Jiabao agreed to boost trade by 50 per cent by 2010 and the British PM also offered China £50 million to help the country tackle climate change(Head & Castle, 2008). As shown earlier, the deputy managing director at Treasury Holdings Robert Tincknell also spent several years building up good relations with the Shanghai officials and eventually won the contract to co-develop Dongtan together with the Shanghai government and SIIC (“BREAKING CHINA,” 2006). As mentioned in the first part of my discussion, it was also in the interests of the political leaders like Chen to build Dongtan eco-city because it provided a good opportunity to form collusion with businesses to make quick money. Due to China’s personnel-promotion mechanism which binds a city’s GDP performance to local officials’ promotion(Zhang, 2006), Dongtan was obviously important for Chen’s political career.

Secondly, meeting the similar interests in economic and career advancement from different actors was made possible by China’s overly centralised political system and corruption. In recent decades, Chinese cities have been granted autonomy and power to be in charge of the regional and city development (Xu, 2008). Shanghai is not the only city in China that has such monopoly power; many cities, mega cities as well as small cities, have been treated in the similar way during the period of decentralisation since the economic reform. This type of political system

made the more flexible bargaining over different interests required by neoliberal planning (Tasan-Kok & Baeten, 2012) less problematic in the case of Dongtan, because the main actor SIIC was solely owned by the Shanghai Municipal Government. Therefore, SIIC and the Shanghai government could basically do what they pleased without much flexible bargaining. In addition, the government-business collusion was formed in order to compromise different interests and maximize the common goal of gaining economic benefits.

Thirdly, as it is relatively easy to overcome the challenges and conflicting interests in eco-city development in China due to the power centralisation and corruption, intercity competition is likely to increase as a result of cities beginning to develop similar high-profile projects. Different agendas are apparent in intercity competition: government officials strive to further their political careers and accumulate wealth while businesses strive for economic gain. It is obvious that Dongtan was considered a flagship project by the government of Shanghai to showcase Shanghai's ambition to become a sustainable city and a research Centre for sustainable development. Other economic benefits Dongtan could bring to the region were employment generation, new investments and local spin-off businesses; and this is particularly in the interests of government officials due to China's personnel-promotion mechanism which binds a city's GDP performance to local officials' promotion (Zhang, 2006). Another study also shows that the trend of decentralisation and regionalisation in China since the economic reform has significantly increase intercity competition as city governments begin to make use of their autonomous power to attract capital investment and boost city economies (Xu, 2008).

Lastly, corruption is reinforced because there is a need for its existence to facilitate the collusion between businessmen and officials. Corruption is not only there to help businesses to overcome China's bureaucratic hurdles, but more often and importantly, it is there because business people and officials are accustomed to it. There are companies that openly accept that bribing Chinese officials is necessary for their success in doing business in China (Jim Barratt, 2013). Under China's political and business climate polluted by corruption, as shown in my data (See Figure 1 and 2), officials and businessmen are tempted to seek personal interests through corruption. In addition to that, a lack of system of checks-and-balances worsens the situation as corrupt individuals and entities succeed without being punished (See Figure 1). Civil society groups and the general public in China are not effective in reporting and overseeing corruption (See Figure 3 and 4) because there is a lack of appropriate whistle-blower protection. Consequently, reporting on corruption is both sensitive and dangerous.

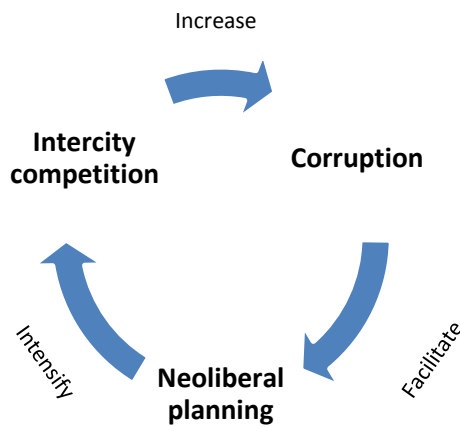


Figure 5: A causal loop showing the interaction between corruption, neoliberal planning and intercity competition: corruption facilitates China’s eco-city development that is supported by the concept of neoliberal planning; the neoliberal planning strategy intensifies intercity competition which in turn increases the likelihood of corruption as a result of public and private actors seeking economic gains through illegal activities. Source: created by the author.

6.4 Dongtan Eco-City: A Solution to Urban Sustainability?

Dongtan eco-city can be considered a good example showing that eco-cities in China, endorsed by green capitalists and supported by neoliberal planners, are particularly vulnerable to corruption. The existing systematic corruption facilitates their developments, which in turn open up opportunities for even more corruption and undermine sustainability. Therefore, whether or not Dongtan eco-city offers an effective solution to urban sustainability is questionable. In terms of environmental sustainability, Dongtan eco-city was to integrate the natural wetland with the modern residential landscape. However, with the opening of a bridge-tunnel connecting Shanghai and the Chongming Island, the large-scale construction as well as increased population flow into the area, the impact would likely be environmentally disruptive. This concern was actually mentioned during the interview with Peter Head from Arup, and he stated that Arup can do no more than provide the tools and guidelines for sustainable development. In the long term, it would be up to the government, the clients and the investors to oversee the development(Head & Castle, 2008). The statement indicates his intention to shift responsibility: for an architect firm such as Arup, their design and vision can be as ambitious as they like because realizing and achieving their ambitious targets is in the hands of others. China has become a laboratory for architects, urban planners, government officials and developers, where they can realize their futuristic visions of China’s urban future, for better or for worse(Blair Kamin, 2014).

Nevertheless, some aspects of social sustainability issues in Dongtan eco-city were brought up by Arup, such as respecting the traditional way of Chinese living, incorporating elements of Chinese culture into parks, preserving the traditional way of using squares, alleys and streets in Shanghai(Head & Castle, 2008). To my knowledge, however, their considerations barely scratch

the surface and offer no real solution to a much bigger social and ecological problem in China. Farmers' land is taken away everyday by government officials without much legitimacy or proper compensation(Cody, 2004). Unfortunately, Dongtan is not an exception. An investigative journalist visited Dongtan and her interviews with the local farmers indicated that some were unhappy about the government's decision to build the city because they would be forced to move(Larson, 2009). In China's rising land grabbing issue, displacements and compensations are rarely justified by the government or the private businesses whose ultimate goal is to advance their personal interests. In addition to that, Dongtan eco-city supported by the idea of green capitalism would be vulnerable to environmental risks that are generated by "building organized irresponsibility into regulatory systems(S. Prudham, 2004)". More importantly, economic interests of the private sector would likely prevail over public interests under the pressure from market forces in the neoliberal urban development system (Tasan-Kok & Baeten, 2012).

The development of Dongtan eco-city was influenced by corruption in various ways from official corruption to collusion; moreover, the lack of supervision from citizens and civil society groups due to the limited freedom of expression, assembly and participation exacerbates this situation. The conflict between public interests and private interests during the process of neoliberal planning is commonly found in even countries with democratic systems, and planning practices have moved away from democratic and participatory processes (Tasan-Kok & Baeten, 2012). The situation is even worse in China where there is no consideration for people's critical self-awareness, public scrutiny or democratic control under the system of neoliberal urban development. Limited freedom of expression and assembly in China as shown in my data (See Figure 3 and 4) undermine the participation of civil society groups and citizens over issues like corruption, environmental degradation and social injustice. However, in recent years we have witnessed the development of China's environmental movement led by NGOs and citizens, and their influence continues to increase thanks to the wide use of social media and mobile technology in China(Ramesh, 2007). At the same time, the government has also tightened the control because of the increasing public awareness of the environment movement in China posing a threat to social stability(Freedom House, 2013).

7 Conclusion

In this study, I have attempted to understand why eco-city projects in China are so vulnerable to corruption and what kind of impact corruption has on their development. In the first part of my analysis, I have discussed how official corruption could affect eco-city development by using the example of Dongtan. I have argued that China's transition from the earlier communist regime to the current socialist market economy has given rise to corruption. This transition is

characterized by bureaucratic hurdles inherited from the earlier communist system, newly established market economy for private actors as well as decentralization which grants administrative monopoly to local officials and incentivizes corruption. All three features of the transition create an environment in which public and private sectors collude with each other to achieve their respective interests, for economic gain and career achievement. In the context of urban development, officials often misuse their administrative power over land issues to create favorable conditions for capital investment, which has negative impact on eco-city projects. As shown in Dongtan, the protection of fertile agricultural land regulated under the Chinese law was neglected in the first place, and the plan to build Dongtan eco-city on the wetland conservation area was approved. This part of the analysis offers some insights into how and under what circumstances corruption takes forms in China as well as its implications for eco-city projects.

In the second part of my analysis, I have argued that *Guanxi*, a commonly-practiced and widely-accepted way of building relations in China, has very detrimental effects on urban sustainability. The quality of many public projects is poor because a large amount of money is spent on gift cards, inviting officials to expensive dinners, and sometimes even luxury trips, leaving only a very small budget for the cheapest labor and inferior construction materials. Dongtan provides an example showing how an Irish developer built up a good relationship with Shanghai officials as well as other private businesses and eventually became a partner in the project. This calls for a rethinking of our fundamental understanding of what corruption is.

In the third part of my analysis, I have put much effort in discussing the causal relation between neoliberal planning, intercity competition and corruption in the context of China's urban development. I have argued that neoliberal planning and the need for Chinese cities to compete with each other for GDP performance have created an environment with a high corruption risk. Dongtan is used as an example to illustrate this relationship: corruption facilitates the realization of eco-city projects supported by the concept of neoliberal planning; the neoliberal planning strategy intensifies intercity competition which in turn increases the likelihood of corruption as a result of public and private actors seeking economic gains through illegal activities. This calls for a holistic understanding of neoliberal planning under China's environment of corruption.

In the last part of my analysis, I have argued that whether or not Dongtan offers an effective solution to China's urban sustainability is questionable because the project undermines environmental and social sustainability. This is related to the conversion of agricultural land into commercial real estate, the potential negative impact on wetland ecology, the relocation of local

farmers as well as the social inequality resulting from a potential high housing price and living cost. This offers some significant understandings of how eco-city projects are being developed in China under the environment of corruption and restricted participation from civil society groups and the general public.

I am aware that my understanding of this topic is in its nascent stage, and the sheer vastness of the country and the diversity in city/regional governance makes it difficult to make generalizations. Therefore, this study should be treated as knowledge for raising awareness instead of a typology of sorts. My study has attempted to illustrate how eco-city projects develop under the influence of market economy and corruption, and it gives an indication of what eco-city development means in China and the potential problems that could derive from it. To fully understand the problem, similar studies need to be carried out on different eco-city projects.

Future research on China's urban sustainability under the impact of corruption would likely continue to face difficulties but is also full of potential. As the Chinese government continues to engage in anti-corruption campaigns, the effects of corruption on urban sustainability will receive more attention because of the current environmental challenges the country is facing. Nevertheless, it is important to recognize that systemic corruption in China cannot be eradicated within a short period of time and will likely face political resistance from various levels of the government. When foreign governments or companies continue to participate in China's urban development and sustainability, there are also opportunities for them to engage in different types of anti-corruption initiatives. One example is mainstreaming anti-corruption into sectors(Boehm, 2014). Internally, different departments of a government or a foreign company need to reduce corruption risks in their own operations through codes of conduct, training and internal control. This is particularly important if they are operating in a country like China with a high corruption risk; they have a responsibility not to contribute to corruption, at minimum (Boehm, 2014).

Externally, foreign governments and companies can take measures to strengthen the anti-corruption capacity of different sectors in the country where they are operating (Boehm, 2014). It is suggested that mainstreaming anti-corruption into sectors would face less political resistance because it is more feasible this way than applying them across government(Boehm, 2014). One example of this cross-country anti-corruption initiative is the cooperation between China and Sweden on the development of Corporate Social Responsibility (CSR). The main goal of this cooperation is to identify and address challenges for companies in implementing CSR: human rights, labor conditions, environment and anti-corruption; and different sectors are being targeted, such as mining, manufacturing and textile industries(Embassy of Sweden in

Beijing). The CSR knowledge is communicated through training programs, conferences, websites and media(Embassy of Sweden in Beijing).

At last, my study is never to pass judgment on the idea of eco-cities. I have attempted to understand how eco-cities are developed in China under the environment of corruption, market economy, city competition and the restricted role of civil society groups and the general public. This understanding tries to pave the way for informed policy-making by governments or private enterprises with regard to the importance of anti-corruption in urban development. Nonetheless, I hope that my study will be successful in introducing new insights and perspectives into the overall study of sustainability in China.

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