China’s Economic Re-emergence After 1978

The Role of Special Economic Zones in China’s Economic Growth, and its Attempts at Industrial Upgrading

Gard Kaarbø Asskildt

Master’s Thesis
Department of Political Science
Faculty of Social Sciences
University of Oslo
Spring 2014
不管白猫、黑猫，逮住老鼠就是好猫。

“It doesn't matter if a cat is black or white, as long as it can catch mice, it's a good cat”.

-Deng Xiaoping
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http://www.duo.uio.no

Print: Reprosentralen, University of Oslo
Abstract

Academic communities have increasingly focused on China’s economic growth after its reforms in the late 1970s. The re-emergence of this economic superpower is greatly affecting several aspects of the current political-economic power balance. In order to interpret the ongoing developments in the international climate, we must understand how and why China achieved its fantastic rates of economic growth.

This master’s thesis is a case study on China’s economic development after 1978, including the development of its economic system and industrial structure. It analyzes China’s use of Special Economic Zones in order to achieve economic growth, introduce capitalism to its domestic economy, and open up to the world. The use of SEZs has positively affected China’s economic growth because they allowed China to undertake economic experiments in controlled areas, attract foreign investors, develop and upgrade its technology, and increase exports. While China under Deng likely would have experienced economic growth also without the SEZs, their establishment speeded up the growth process. The Shenzhen SEZ is analyzed in detail, as it was the most successful of the initial four zones.

Furthermore, China’s attempts at industrial upgrading are analyzed. It is discussed whether this process has been more in line with a comparative-advantage-following or a comparative-advantage-defying development strategy. China has managed to upgrade its industrial structure, but it is still lagging behind more developed countries. The attempts at upgrading were not clearly in line with either strategy, but have featured elements of both. The Shenzhen SEZ is once again studied in further detail. It has developed through following its comparative advantages and a CAF strategy to a greater extent than China in general.
Forord


Jeg ønsker å takke min hovedveileder Helge Hveem, samt min biveileder Espen Moe, for all den hjelp, veiledning, og de innspill jeg har mottatt under arbeidet med denne masteroppgaven. Deres kombinasjon av faglige og personlige kvaliteter har uten tvil vært uvurderlige i skrive- og forskningsprosessen gjennom de to foregående semestrene.

Jeg er også takknemlig overfor dem som har bidratt i form av gjennomlesninger, tips og råd, og moralsk støtte underveis – samt mine foreldre som gjennom oppfordringer om å reise til Kina i 2007 bidro til at min interesse for landet oppsto.

Potensielle feil i denne oppgaven er mitt ansvar, og synspunktene som presenteres er kun mine egne.

Oslo, mai 2014

Gard Kaarbo Asskildt

Antall ord: 37,105
Acknowledgements

I have for some time been fascinated by China. Its rich history, fantastic economic growth, and culture and language have interested me since I first visited the country in 2007. It has therefore been highly stimulating to write my master’s thesis on “the Middle Kingdom”. I believe that in order to interpret the current world situation and the developments we are experiencing, it is essential to understand China. Unfortunately, I have not had the possibility to take any university courses on China. Hence, being able to focus on the country in my last academic year has been very rewarding. It is my desire that Norwegian universities will focus on China to a bigger extent in the future, and this master’s thesis is my humble contribution towards that goal.

I want to sincerely thank my supervisor Helge Hveem, as well as my co-supervisor Espen Moe, for the assistance, contributions, and guidance given to me while writing this thesis. Their combination of academic knowledge and personal qualities has without a doubt been invaluable in the writing- and research process over the past two semesters.

I am also grateful to those that have assisted me with proof reading, and provided me with advice and support, while writing this thesis. Finally, I want to thank my parents for encouraging me to visit China in 2007, as this sparked my interest in the country.

Possible errors in this thesis is my responsibility, and the opinions expressed are solely my own.

Oslo, May 2014

Gard Kaarbo Asskildt

Word count: 37,105
# Table of Contents

1 The Chinese Economic Miracle After 1978 - the Middle Kingdom´s Re-emergence as an Economic Powerhouse ................................................................. 2
   1.1 The Awakening of a Sleeping Giant ................................................................. 2
   1.2 A Unique Economic Miracle ............................................................................ 2
   1.3 Deng and His Reforms ..................................................................................... 4
       1.3.1 “Some Must Get Rich First” and Gradual Economic Reforms ....................... 4
       1.3.2 Special Economic Zones as Economic Laboratories and "Windows to the World"... 5
       1.3.3 Growth Through Exports and Foreign Investments ....................................... 5
1.4 Development and Economic Growth Strategies ................................................. 6
1.5 The Aim, Scope, and Structure of This Master´s Thesis ..................................... 6
   1.5.1 Thesis Questions ......................................................................................... 8
1.6 Methodological Considerations ......................................................................... 8
       1.6.1 Choice of Research Method – the Case Study ................................................ 9
       1.6.2 Choice of Sources ..................................................................................... 11
       1.6.3 Validity .................................................................................................... 12
       1.6.4 Reliability ................................................................................................. 14

2 The Roles of State and Market in Economic Growth, the East Asian “Miracle”, and Technological-Industrial Upgrading .............................................. 18
   2.1 The Role of the State in Economic Growth ...................................................... 18
   2.2 The Debate on State Versus Market ................................................................. 19
       2.2.1 The Washington Consensus ........................................................................ 20
       2.2.2 The East Asian “Miracle”: Growth With an Interventionist State ................ 21
       2.2.3 No East Asian “Miracle” at All? ................................................................. 23
       2.2.4 Rejecting General Development Strategies ............................................... 23
       2.2.5 “Embedded Autonomy” in East Asia ......................................................... 24
   2.3 Technological and Industrial Catching-up: Following or Defying Comparative Advantages? ....................................................................................... 25
       2.3.1 Lin: Development Through a Comparative-Advantage-Following Strategy .... 25
       2.3.2 Chang: Development Through a Comparative-Advantage-Defying Strategy ... 27

3 Export-Processing Zones: Their Purpose and Contributions to Economic Growth .............................................................................................................. 30
   3.1 Export-Processing Zones as Instruments for Economic Growth ....................... 30
   3.2 The Purpose of Export-Processing Zones ......................................................... 31
   3.3 EPZ Influence on the Host Economy: Positive or Negative? ............................. 32
       3.3.1 Potential Positive Contributions .................................................................... 32
       3.3.2 Potential Negative Contributions ............................................................... 33
   3.4 The Role of Government in EPZs ..................................................................... 35

4 Developments in the Chinese Economy Under Mao ......................................... 37
   4.1 The Choice of Development Strategy ............................................................... 37
       4.1.1 The Soviet Union as a Role Model and a Focus on Heavy Industry ............... 37
       4.1.2 The Great Leap Forward and the Cultural Revolution .................................. 39
       4.1.3 Achieving Growth Despite a Failed Development Strategy ......................... 40
       4.1.4 The Death of Mao and the Emergence of Deng .......................................... 41

5 The Chinese Economy Under Deng .................................................................. 42
   5.1 Deng´s Initial Economic Reforms ................................................................. 42
       5.1.1 Early Reforms in the Agricultural and Industrial Sectors ............................... 43
List of Tables

Table 1: Arguments for and Corresponding Arguments Against the Use of EPZs ........................................ 35
Table 2: Government Revenues and Costs Associated With EPZs ............................................................ 35
Table 3: Real GDP in the First Four SEZs in RMB Billion. Various Years .................................................... 35
Table 4: Export Performance of China and Chinese SEZs, USD Million. 1980-2005 .................................... 58
Table 5: Important Incentives in the Law on Joint Ventures and in the Regulations, and How They Benefited Both Foreign Investors and China .......................................................... 61
Table 6: FDI to the Initial Four SEZs, 2009 USD Million. Various Years .................................................... 65
Table 7: Developments in China’s Industrial Composition, as % of Total Industry. 1978-2012 .................... 82
Table 8: Share of Manufactured and Primary Goods as % of Total Chinese Exports. 1980-2010 ............ 84
Table 9: Composition of China’s Export of Manufactured Goods as % of Total. 1980-2010 .................... 84

List of Figures

Figure 1: Growth in GDP and GDP per Capita, Annual %. 1978-2012 ...................................................... 45
Figure 2: Growth in GDP, Current USD Billion and GDP per Capita, Current USD. 1978-2012 ................ 45
Figure 3: Growth in Imports and Exports of Goods and Services as % of GDP. 1978-2012 .................... 47
Figure 4: Map of the First Four SEZs in China ......................................................................................... 48
Figure 5: Growth in Shenzhen’s GDP, RMB 10,000. 1979-2010 .............................................................. 51
Figure 6: Growth in China’s Composition of Exports, USD Billion. 1980-2010 .................................. 73
Figure 7: GDP Share of Shenzhen’s Three Main Industrial Sectors as % of Total. 1979-2010 ............ 83
Figure 8: GDP Share of Shenzhen’s Three Main Industrial Sectors as % of Total. 1979-2010 ............ 100
Terms and Abbreviations

*CAD*: Comparative-advantage-defying strategy

*CAF*: Comparative-advantage-following strategy

*CCP*: Chinese Communist Party

*CDS*: Coastal development strategy

*CSY*: China statistical yearbook

*EADM*: East Asian Development Model

*EPZ*: Export-processing zone

*FDI*: Foreign direct investment

*FYP*: Five-year plan

*GDP*: Gross domestic product

*HRS*: Household Responsibility System

*IMF*: International Monetary Fund

*JV*: Joint venture

*R&D*: Research and development

*RMB*: Chinese Renminbi. Also know as Yuan (CNY)
**SEZ:** Special economic zone

**SOE:** State-owned enterprise

*The Four Asian Tigers/The East Asian Tigers:* Commonly used as a reference to South Korea, Taiwan, Hong Kong, and Singapore.

*The four original/initial SEZs:* Shenzhen, Shantou, Zhuhai, and Xiamen.

**TVE:** Township and village enterprise

**USD:** US Dollar
1 The Chinese Economic Miracle After 1978 - the Middle Kingdom’s Re-emergence as an Economic Powerhouse

Chapter Outline:
This introductory chapter presents the main elements of this master’s thesis: the topics that are analyzed, the thesis questions it seeks to answer, as well as its aim, scope, and structure. Furthermore, it lays out the choice of research method and design of the thesis.

1.1 The Awakening of a Sleeping Giant

Much have been said and written about China’s economic miracle since it’s beginning in the late 1970s. Practically everyone - including economic experts, commentators, scholars and the average citizen – recognize China’s position as an economic leader in today’s world. A lesser-known fact is that China’s economic transformation is not merely the tale of a backwards nation becoming a major economic player for the first time. China’s major share of the world’s gross domestic product (GDP) is no new phenomenon: it has been estimated that in 1820, its share of world GDP accounted for an impressive 33 %, compared to 17 % and 2 % for Europe and the U.S. (Bekkevold and Kristoffersen 2012: 14; Lin 2007: 18).

Thus, China’s experiences over the last decades should perhaps not be that surprising: it is not just a story of its road from rags to riches, but also the tale of a glorious nation reclaiming some of its former pride. Being a proud people, this is of course not unknown to the Chinese, and in their view, what we are experiencing is a return to the normal state of things in the world system, at least from a historical point of view (Bekkevold and Kristoffersen 2012).

While this aspect is important to acknowledge, make no mistake: China’s post-Deng experience can rightfully be claimed an economic miracle. Despite former economic achievements, Deng coming to power in the late 1970s in many ways mark the beginning of China’s modern-day industrialization and economic growth process.
1.2 A Unique Economic Miracle

The Chinese economic transformation is something quite unique. China’s accomplishments of rapid and sustained economic growth over the last three and a half decades are even more impressive considering the economic turmoil the world witnessed over the same period. In the “lost decades of development” in the 1980s and 90s, many developing countries, such as several Latin American states, failed in their attempts at achieving economic progress. Around and after the fall of the Soviet Union, many of its former states experienced systematic crises and economic hardships. In more recent times, the Asian financial crisis of 1997 devastated much of the region, and the financial crisis of 2008 had a huge impact on every region of the world (Lo and Zhang 2011: 33). While many other countries have been struggling economically, China’s economy has been steadily growing, and growing at an impressive rate: annual growth after the economic opening up in 1978 until 2012 was almost 10%. In actual numbers, China’s GDP grew from USD 148.2 billion in 1978 to USD 8,227.1 billion in 2012 (World Bank 2014).

Another interesting aspect about China’s economic growth is that Chinese policy makers largely ignored the theories dominating the field of developmental economics when their country embarked on its long period of rapid, sustained growth. According to the Washington Consensus, an influential school of thought at the time, a country deviating so much from traditional free-market policies should not be able to achieve such astonishing rates of economic growth (Lo and Zhang 2011: 35). Due to the unique way several East Asian economies have developed, many scholars focus on growth-theories different from the traditional theories developed in the Western world. Terms such as the Beijing Consensus, China’s Development Model, and the East Asian Development Model (EADM) (Baek 2005: 485; Hsu 2011: 2-3) have gained much support as it has increasingly been acknowledged that the Western take on economic development might not be the right strategy in other parts of the world.

Not only does China’s recent economic growth puzzle free-market-advocating scholars and policy experts. More left-leaning scholars are also facing a paradox as they have been forced to admit that China has experienced economic growth through capitalist reforms, something many leftist scholars traditionally have claimed should not be possible (Lo and Zhang 2011).
Hence, it is clear that what China has managed to do over the last decades is something that has rocked the boat of several schools of developmental economic thought.

### 1.3 Deng and His Reforms

The event that largely marked the start of China´s economic transformation was the Third Plenum of the 11th Central Committee Congress of the Communist Party of China (CCP) in December 1978 (Hou 2011: 421). Deng Xiaoping had defeated the so-called *Gang of Four* in the power struggle following Mao Zedong´s death (Lin 2012: 153). Deng was a visionary, and radically different from his predecessors. It was important for him to distance himself from the policies of the past, and to win support among the public. In addition, Chinese culture makes it hard to renounce previously pursued policies (Lin 2007). Deng played an important part in the launch of the economic reforms that eventually led China to where it is today. Now it has the world’s second biggest economy, and it is believed that it will become the number one economy in the near future (Jacob 2014; Riley 2014; Singleton 2014; Yew 2013).¹ The official objective of the economic reforms in China has been to create a system where socialism and the free market are combined, forming a hybrid system of “socialism with Chinese characteristics” (Hou 2011: 420, 422).

#### 1.3.1 “Some Must Get Rich First” and Gradual Economic Reforms

The reforms after 1978 were gradually implemented, and emphasized a dual-track reform approach where the market complemented the planned economy, something many Western scholars were highly skeptical about. Given both Deng´s political background and China´s history after 1949, a full-blown, free-market reformation of the economy was not an alternative (Lin 2012), and probably not a very good solution either. In hindsight it seems that the economy was reformed in the right way, especially when compared to Russia´s experiences with “shock reforms”. In accordance with the gradual nature of the economic reforms, China´s coastal regions were on the forefront of economic development, paving the way for the other parts of the country. Deng himself stated in one famous quote: “*some must get rich first*” (BBC News 2004).

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¹ In final stages of writing this thesis, it was even predicted that China’s economy would overtake that of the U.S. within 2014 (Giles 2014).
This quote illustrates a developmental policy very different from that under Mao, where the general policy had been to establish industrial activity all over China. If anything, the inland areas were favored, due to factors related to the military and defense system of China and because the rural areas that had supported Mao’s liberation struggle were to be rewarded. Deng’s pragmatic development policies after 1978 led to the development of the coastal areas as these had the biggest potential for economic growth, with its greater experience in industrialization and commerce, links to rich overseas Chinese in Southeast Asia, and convenient geographical proximity to the ocean and to the more developed areas of Taiwan, Hong Kong, and Macao (Howell 1993; Sheng 2010). The increasing inequality between different parts of the country has led to tensions during the course of the economic development. Although preferential policies were implemented in the interior parts of China after the mid-1980s, the Eastern parts of China developed much faster than the rest of the country. This difference is highly visible today, with the Eastern part of China hosting the richest and most modern cities such as Beijing, Shanghai, and Shenzhen (Howell 1993).

1.3.2 Special Economic Zones as Economic Laboratories and “Windows to the World”

An important policy in the development of the coastal areas was the establishment of Special Economic Zones (SEZs). SEZs were areas with flexible and preferential policies regarding foreign-oriented economic activities, first tried out in selected areas of Guangdong and Fujian provinces in 1979. Their creation marked the start of China’s economic opening up to the world, and eventually several new economic zones of different types were also established. These zones have been important instruments in China’s economic growth strategy. After Deng’s famous “southern tour” in 1992, the economic liberalization was expanded to other areas as well (Hou 2011; Howell 1993). While the SEZs acted as tools for economic growth, they also played a crucial role as economic laboratories with the aim of drastically altering the entire economic system of China. Their creation represents the efforts of transforming the world’s biggest planned economy into one where the market was allowed to play a part for the first time under the CCP. These zones gave China the opportunity to slowly integrate itself in the world economy. The presence of foreign firms and capitalist policies in these areas was unthinkable prior to the economic reforms.

1.3.3 Growth Through Exports and Foreign Investments
In addition to the transition from a centrally planned economy to one based more on the free market, China’s economic growth has been fueled by a shift of production activity from the low-intensive agricultural sector to labor-intensive industries, and later increasingly to more capital- and technology-intensive ones (Saich 2011). Products were exported to foreign markets, something that created revenue needed to pay for necessary imports. China managed to use its comparative advantage of having an abundance of low-skilled workers willing to work for low wages (Bjerkholt 2012). Historically, this has not been the case. When Mao Zedong came to power in 1949, China followed a heavy-industry-oriented development strategy. However, the country was scarce in capital, which were needed in the capital-intensive industries China tried to promote. The state tried to promote heavy industries by giving incentives to producers, such as subsidizing the cost of capital, energy, and raw materials. When the heavy-industry-oriented development strategy turned out to be unsuccessful, and eventually the neighboring East Asian Tigers developed rapidly, China had to change its development strategy (Lin, Cai, and Li 2003). The result was an export-oriented development strategy that to a greater extent than before utilized China’s comparative advantages (Lin 2012). The Chinese state has actively tried to increase the export sector and attract FDI, as it could increase economic activity, create revenue and accumulate foreign exchange, and facilitate the transfer of more advanced technology and know-how.

1.4 Development and Economic Growth Strategies

There are differing views on how a developing country best can achieve economic growth. The growth of East Asia, and later on China, is important because the way they developed and achieved economic growth is contrary to developing strategies that have been influential in the past. Also how a developing country best can upgrade its industrial structure has been subject of discussion, and this is linked to the debate on the roles of the state and the market in economic growth. In both cases, there are differing opinions between those favoring an active and interventionist state, and those believing that the free market best can create prosperity for a country. Ideology has likely influence such views. The roles of the state and the market in economic growth, and how China has attempted to upgrade its industrial structure, is debated in depth in later parts of this thesis.
1.5 The Aim, Scope, and Structure of This Master´s Thesis

The underlying aim of this master´s thesis is to analyze and evaluate China´s economic growth and the changes in its economic system. It seeks to study how the SEZs contributed to these developments. Furthermore, it analyzes the developments in China´s industrial structure, and whether the attempts at upgrading it have been in line with a comparative-advantage-following (CAF) or a comparative-advantage-defying (CAD) strategy.

This thesis can be divided into four main parts:

- Chapters 1-5 cover the theoretical and methodological framework of the thesis, the use of Export-Processing Zones (EPZs) in developing countries, and the developments in the Chinese economy, first under Mao, and later after Deng´s reforms. These chapters are included to provide an underlying analytical framework, and to highlight vital developments one have to understand in order to evaluate the Chinese economic growth process. Important theoretical concepts and methodological considerations are outlined in the first chapters. How EPZs function and affect developing countries is discussed because it has influenced the creation of similar zones in China. Furthermore, it is necessary to be aware of the developments in China under Mao when analyzing the radical reforms launched by Deng, while Deng´s reforms in turn have been fundamental to China´s miraculous economic growth and industrial development.

- Chapter 6, the first of two analytical chapters of the thesis, covers China´s SEZs. It lays out their creation and how they developed, as well as the government´s policies towards them. It continues to analyze the reasons for their establishment, how they benefited China´s economic growth, and their contributions to the changes in its economic system. The case of the Shenzhen SEZ is analyzed in-depth.

- Chapter 7 is the second analytical chapter of the thesis. It covers the developments in China´s industrial structure, and evaluate whether China has managed to upgrade it. It goes on to study if the attempts at industrial upgrading have been in line with a comparative-advantage-following or comparative-advantage-defying strategy, and
two specific industries are used as examples. As in the first analytical chapter, the case of the Shenzhen SEZ is once again considered in detail.

- Chapter 8 is a brief concluding chapter, wrapping the thesis up and discussing some implications for further research.

1.5.1 Thesis Questions

In order to conceptualize what this thesis seeks to analyze, two sets of thesis questions have been formulated; one for each of the two analytical chapters.

The first analytical chapter seeks to answer the following questions:

- What were the government’s policies towards the SEZs?
- Why were the SEZs established and how did they contribute to China’s economic growth and the development of its economic system?

The second analytical chapter seeks to answer the following questions:

- Has China successfully managed to upgrade its industrial structure after 1978?
- Have the attempts at upgrading been in line with a comparative-advantage-following or a comparative-advantage-defying strategy?

1.6 Methodological Considerations

When writing a master’s thesis, there are a number of methodological considerations one has to take into account – how the research project should be undertaken, the choice of research method, what type of sources one chooses to rely on, and issues related to validity and reliability, to name a few important elements. In this section, the main methodological choices of this thesis are laid out. Due to a limited amount of available space, only some important methodological considerations are covered. However, other methodological issues not mentioned here have been considered as well.
1.6.1 Choice of Research Method – the Case Study

This thesis is about China, and it does not seek to generalize or compare a number of countries. The choice of research method depends on the problem one wants to study and its circumstances (Flyvbjerg 2006). As the only country of concern is China, the case study stood out as the most fruitful choice of research method. The case study is essentially qualitative, because a detailed study of a large number of cases is difficult. However, elements of the quantitative research method might also be included in a case study, something that makes it flexible (Gerring 2009). It has been argued that one cannot refer to “qualitative research” as a distinctive research strategy (Bryman 2004: 267). King, Keohane, and Verba (1994) argue that the qualitative and quantitative research methods are not as different as some portray them, with the same underlying logic evident in both research methods.

A case study might be defined as “the intensive study of a single case where the purpose of that study is – at least in part – to shed light on a larger class of cases” (Gerring 2009: 20). The concept of a “case” is a somewhat vague term, and something that might be described or defined in a number of ways. However, it is probably useful to attempt to define it clearly. Gerring (2009: 19) describes the case as “a spatially delimited phenomenon (a unit) observed at a single point in time or over some period of time”.

This master’s thesis is a case study of China’s economic development after 1978, including the development of its economic system and its industrial structure. These are the predominant topics of the thesis. The phenomena are observed over a period of time, in order to evaluate how they have changed over the course of China’s development.

In order to understand this, phenomena at more detailed levels are also studied. The role the SEZs played in the growth and development of the Chinese economy is studied. Furthermore, China’s attempts at industrial upgrading are analyzed, evaluating whether these most resembled a CAD or a CAF strategy. The Shenzhen SEZ is studied in greater detail, in order to illustrate how one specific SEZ has developed and benefited China in the pursuit of its developmental goals. These elements are included because they contribute to shedding light on the main topic of the thesis.
The Case Study and Possibilities of Generalization

Flyvbjerg (2006: 224) argues that the view that case studies cannot be generalized is a common misconception about this type of research method. This is a valid point, and there might be too much skepticism about the ability to generalize from a case study onto a larger population of cases. It might be argued that any single case is a study of a broader class of cases or phenomenon (King et al. 1994). This master’s thesis might be viewed as a case study on economic development, and it does present knowledge and evidence that both supports and object to other models of development.

At the same time, one should be reluctant to assume that the results of a case study of a limited scope might be readily applied to a larger population of cases. Furthermore, not everyone believes that generalization in itself should be the goal of a case study. It has been argued that generalization is overrated as the main driver of scientific progress, and that it is important to value the findings of small-N case studies without the goal of generalization. Flyvbjerg (2006: 227) states: “a purely descriptive, phenomenological case study without any attempt to generalize can certainly be of value in this process and has often helped cut a path toward scientific innovation”.

As is discussed further in the theoretical chapter, the experiences of both the East Asian region as a whole, and each of its individual countries, has to be viewed in light of the unique conditions of the respective country. That is not to say that no similarities exist. Elements of the developmental experience of the East Asian economies can be applied to China, and the concept of an EADM is not without its applicability. Likewise, some of the past and current developments of China can possibly be used to analyze other developing countries of the world. If this is something one attempts, a high degree of skepticism and caution has to be kept in mind. While generalizing from China’s developmental experience to other developing countries is not the aim of this thesis, future research on how developing countries can achieve economic growth might benefit from an evaluation of the Chinese developmental experience.

The Case Study is Valuable in Itself

A misunderstanding about the case study is that it is most useful in the early steps of the research process, and that the application of other research methods are more fruitful later in
the study. Additionally, it has been claimed that it is difficult to summarize and develop general theories on the basis of specific case studies, and that the case study is often viewed with suspicion and sometimes even described in lesser terms than more statistical research methods. The case study is valuable in itself, even if one does not attempt to generalize its findings, and it should not be limited to only generating hypotheses in the beginning of the study, as it may be fruitful in other parts of the study as well. The case study makes up a large degree of the research being produced by scientists, and it continues to generate new insight into the social sciences (Flyvbjerg 2006; Gerring 2004).

Why the Case Study Method Was Chosen

This thesis seeks to extensively analyze some important elements of China’s economic and industrial transformation. I do not attempt to compare a number of countries, and I feel a more purely quantitative research method would not have allowed me to study China as intensively as I desired. Using the case study method gave me flexibility, and I feel the lacking availability of statistics on China could have presented a problem if a more quantitative-oriented research design had been chosen.

Conducting interviews or doing fieldwork in China was also something I chose not to do. I believe it would have been difficult getting access to policy experts in China, and get them to talk freely about my matters of interest. I considered a case study relying on written sources the right choice of research method for this thesis, and it allowed me to study my phenomenon of interest as intensive and extensive as I desired. Furthermore, the available data material on the topics of this study is limited. Hence, I believe the best choice of research strategy was to conduct qualitative assessments of the empirical phenomena I observed.

1.6.2 Choice of Sources

This master’s thesis uses written sources, such as books, reports, papers, statistical databases, and articles from academic journals. It is about broad and complex themes, and relying on a

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2 Statistics from the Shenzhen Statistical Yearbook 2011 is used in later parts of this thesis. It is not specified whether this book refers to the Shenzhen SEZ, or the city of Shenzhen. The publisher has not responded to my inquiry. However, it is natural that most of the economic activity going on in Shenzhen city was a result of the SEZ, as the city was small and not very developed when the SEZ was established. Thus I believe the Shenzhen
large variety of sources was necessary. Understanding such multi-faceted topics as China’s economic and industrial developments over several decades requires vast amounts of information, and analyzing documents enabled me to study these topics from a number of angles. It also ensured that I could gather the information I needed for each part of the thesis, which covers several lower-level research topics, such as the Chinese economy under different leaders and economic systems, the use of EPZs and SEZs, and various strategies aimed at economic and industrial development.

This thesis is based on various forms of written sources, and the different types of documents have complimented each other. When developing the theoretical and analytical framework, I relied to a large extent on books, and the empirical data was to a bigger degree gathered from less theoretical journal articles. I have also utilized conference and working papers discussing various aspects of the phenomena I analyze, and statistical books have provided me with the data needed to illustrate my findings. I believe the choice of documents as my primary source, and the types of documents I relied on, allowed me to use empirical data to exemplify and compliment the theoretical framework this thesis is founded on.

1.6.3 Validity

Validity and reliability are important concepts in all kinds of research. These are broad and somewhat vague concepts concerning many elements of the quality of a research project. Skog (2010: 87) claims validity is about “avoiding research-related pitfalls” (my translation). One can refer to several different aspects of a research process when using the term “validity”, such as the validity of measurements, how a study is designed, how one interprets data, or how one generalize one’s findings (Skog 2010). Validity is not an absolute term. One has to strive to achieve the highest possible validity in a study, but perfect validity can hardly be expected.

Statistical Yearbook 2011 is useful, even if it happens to cover a larger area than just the SEZ itself. The general pattern of Shenzhen’s economic development would nonetheless be portrayed sufficiently correct even if the numbers in the Shenzhen Statistical Yearbook 2011 were representing a somewhat different area. Additionally, there is no better statistical resource on Shenzhen available. Using a statistical book from a larger area, for example the entire Guangdong province, in order to illustrate developments in the Shenzhen SEZ, would pose a much bigger problem.
While there are several types of validity, the two types relevant for this thesis is external and internal validity. External validity is concerned with the ability to generalize from the findings of a case study, something that has been discussed earlier in this chapter. The ability to generalize is viewed differently by the individual scholar. One can argue that combining specificity and generality is not possible (Gerring 2009). While one should be cautious when attempting to generalize from the findings of a case study, many cases might also be viewed as part of a bigger population of cases (King et al. 1994). This master’s thesis is a case study on economic development, and future research might be able to draw on its conclusions. However, the case of China’s economic development is unique, and this has to be kept in mind if one attempts to generalize its experiences onto other cases of developing economies.

Internal validity is about the relationship between cause and effect. The findings of a research project has to be the result of the operationalization of the study, and high internal validity requires that a study measures what it claims to be measuring, and present findings that are in accordance with reality (Lund 1996). An experimental study can allow the researcher to conduct experiments under controlled circumstances. However, in other types of studies the researcher cannot control the external environment. Hence, one cannot know for certain that the internal validity is sufficiently high (Skog 2010).

Finding indicators of economic performance is always difficult when studying an undemocratic and non-transparent state like China, and one has to be careful when relying on official statistics. However, one does not have the liberty to cherry-pick statistics from a range of sources, and one certainly cannot lean on the highly developed websites of statistical bureaus like the Norwegian SSB. Some of the data I use in this thesis are based on a universally acknowledged source like the World Bank. Data is also gathered from various Chinese statistical yearbooks, and to a lesser extent from second-hand sources like books and renowned academic journals using official Chinese statistical resources, in those cases where the primary source was not available to me.

The data availability on the topics I study presents a challenge to the validity of this thesis. I had to use the data that was available to me, but the available data is not necessarily what allows me to answer the thesis questions I present. I do believe the data in this thesis can be used to shed light on the topics being studied. However, ideally there would have been a
larger amount of data and statistics available to me. This could have increased the validity of this study. Unfortunately, the data a researcher desires is not always available to him or her.

1.6.4 Reliability

Reliability is about issues of consistency of measurements (Bryman 2004). This means that a different researcher should be able to replicate a study, or collect the same data at a later point in time. Reliability is also concerned with such elements as a correct operationalization of variables, collection of data, and coding. This is generally more relevant in a quantitative study. In relation to this concept, perhaps the main issue I encountered was using official Chinese statistics, which is discussed further in the next section. A researcher conducting a similar type of study at a later point in time could come to the same conclusions as I have, although how one personally evaluates the data material would affect the findings and conclusions of such future studies. However, a future study with a different conclusion would not necessarily present a problem to the reliability of this study.

It is of my opinion that the research I have conducted has a sufficiently high degree of validity and reliability. I have critically reviewed every source I have used, and continuously strived to avoid common mistakes often encountered when conducting research. I believe my results are in accordance with what I initially wanted to study, and I feel I lay out a clear and correct picture of the actual happenings in China over the past decades.

The Reliability of Official Chinese Data

Determining the reliability of official Chinese data is not an easy feat. Although it is not ideal, for the most part the only publisher of relevant economic data from China is the Chinese government itself. Naughton (2007: 141) states that “no one has ever demonstrated that the extensive Chinese numbers published are mutually contradictory or inconsistent with externally verifiable facts”, and there are no real alternative sources of data. Hence, one has few other options than to use the available official data.

The main problem with the official Chinese statistics, in my view, is that they are coming from a non-democratic government not exactly known for its transparency. One cannot simply take for granted that what it publishes is reliable, and one has to keep in mind that its main function is not necessarily to provide the public with accurate information, but rather to
make the CCP and the way it runs the country look good. Especially local GDP statistics have been criticized, often reporting numbers inconsistent with national figures (Schiavenza 2013; Scissors 2014). Another problem is that China is a country in transition and also a developing country, and in such countries statistical errors are often a problem because of the big changes they are undergoing (Naughton 2007).

Chow (2006) is of the opinion that official Chinese statistics generally are reliable. He puts forth a number of arguments to prove why this is the case. He argues that the staff producing the yearly-published China Statistical Yearbook (CSY) is required by law to provide accurate statistics. He goes on to claim that reports presented by the Chinese Premier are based on official statistics, information that is used for planning purposes and are “subject to review” by international observers (Chow 2006: 397) and “under the scrutiny of the entire world” (Chow 2006: 398). Furthermore, official Chinese statistics have been used in numerous articles published in academic journals. Based on these arguments, he concludes that “official data are by and large reliable” (Chow 2006: 412), based on his own experiences.

In my view, these arguments are too simplistic. The first argument is problematic. Even if Chinese law is requiring the staff publishing the CSY to put out accurate statistics, the Chinese legal system is not exactly renowned by judicial experts in other countries. One cannot know for certain that Chinese statistics are reliable simply because laws state that they should be. The second argument might have more too it, as China naturally would not want to base its national plans on false statistics. Still, if the Chinese leadership did indeed present false information, they would obviously use accurate data instead when planning the nation’s future, and not rely on information they knew were inaccurate. Furthermore, the entire world isn’t studying every official Chinese report to the extent the author claims. The last argument is true – official Chinese statistics are used all the time in renowned academic journals – but this has likely as much to do with the limited availability of Chinese data, as with the trust in official Chinese statistics. Fernald, Malkin, and Spiegel (2013: last paragraph) have developed alternative estimates of China’s GDP growth, and can also be said to be somewhat supportive of official Chinese statistics. They find that Chinese growth has been “in the ballpark of what official data have reported”.

While Chow supports the validity of official Chinese statistics, numerous other scholars do not. Nakamura, Steinsson, and Liu (2014) suggest that official Chinese data are smoother
than what they really are, overstating inflation and understating growth when inflation was low in the 1990s, and understating inflation while overstating consumption growth in the following decade. Rawski (2001) believe Chinese GDP data are exaggerated. The accuracy of official Chinese statistics is questioned in Rawski and Wei (2001) and Holz (2004). Wang and Meng (2001) find that China’s industrial growth was over-reported in the 1990s.

Interestingly, in 2007 Li Keqiang supposedly claimed that Chinese GDP statistics was man-made and unreliable. At the time, he was head of the CCP in Liaoning province. Obviously, this was not something he publicly claimed, but rather a confidential memo leaked by WikiLeaks (Reuters 2010; Wikileaks.org 2007). Li is today the Premier of China and the Party Secretary of the State Council. A major issue is the lack of alternative statistics on Chinese economic indicators, such as GDP. Alternative measurements have been developed, but these are estimates. Some of these alternative graphs are based on what Li in 2007 said could better illustrate economic activity; electricity production, rail cargo shipments, and loan disbursements (Fernald et al. 2013). While these low-profile statistics might be more reliable than the more important GDP figures, they are still Chinese statistics, so in that sense we are back to square one.

The bottom line is that one does not have many other options than to use the official statistics presented by the Chinese government, always analyzing them skeptically. Official data are widely used in various publications in need of statistics on China. Despite the criticism of official numbers, I still think they can be used to illustrate broad developments in the growth of the Chinese economy.

**Using GDP as a an Indicator of Economic Activity**

This thesis uses broad and general economic statistics, such as GDP, to illustrate the main developments in the Chinese economy. Many scholars have criticized the use of GDP figures to illustrate economic activity. It is not a very substantial indicator, but it can illustrate the main trends of how an economy performs. The main goals of this thesis is to show how the Chinese economy has developed, how the SEZs has affected this growth, and how China has attempted to upgrade its industrial structure. Using general indicators like GDP growth and FDI inflows is useful in this regard. If this thesis sought to explain the developments of a

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3 See for example Schiavenza 2013 and Scissors 2013.
narrower field, say the performance of a particular industrial sector, in one single province, in
the course of one year, GDP figures would obviously not suffice. In illustrating general
economic trends, however, I think they can be useful.
2 The Roles of State and Market in Economic Growth, the East Asian “Miracle”, and Technological-Industrial Upgrading

Chapter Outline
This theoretical chapter puts forth the underlying theoretical framework this thesis is founded on. It considers the debate around the roles of the state and the market in a country pursuing economic growth, and lays out some of the dominant views in this debate. The chapter reflects on the theory of comparative advantage, and puts forth two different opinions on whether a country should seek to follow or strategically defy its comparative advantages based on its factor endowment structure.

2.1 The Role of the State in Economic Growth
How might a state facilitate economic growth, create prosperity, and ensure the welfare of its citizens? It would not be an exaggeration to claim that it is not only one of the central questions of political economy and political science, but also a fundamental element in the essence of the modern political system. The role of the state in the never-ending struggle for increased prosperity, wealth and financial security is something that has been debated and studied for many years, and something that will continue to puzzle policy makers and economists long after our time (Zhang 2002).

States have played, and continue to play, vital roles in the economic situation of the geographically defined entity they control. An authoritarian state like the Chinese can influence its economy more than a democratically elected government, due to its increased autonomy in internal affairs and absence of having to answer to an electorate. With an increasingly globalized world economy, a state wanting to succeed economically has to take international conditions into account. Ignoring world markets and economic realities will lead to a certain death, economically speaking. The isolated state of North Korea is just one example of what ignorant economic policies can lead to.
China stands out as a particularly interesting case when trying to understand the role of the state in economic growth, and how it is influenced by the world economy. With its fantastic economic growth over the past decades, it has established itself as a major economic player, estimated to overtake the U.S. and become the world’s biggest economy in the near future (Jacob 2014; Riley 2014; Singleton 2014; Yew 2013). Not only is its history fascinating, so is its future: it has the world’s biggest population and its third biggest land mass, and major social, environmental and political challenges. The ruling CCP is determined to stay in power while experiencing some of the most drastic changes in the country’s long history.

2.2 The Debate on State Versus Market

China is a strong, authoritarian, one-party state where the CCP controls most aspects of both daily life and the broader directions the country is moving in. The degree of state involvement in the economy is high, and more tolerated than in for example the U.S., where many look upon the government with suspicion. Despite the difference in government involvement in the respective economies of various countries, one can argue that the state plays some role in any economy, regardless of ideology and history. Evans (1995) argues that state involvement in the economy is a question of what kind of involvement, and not how much. He wants the debate to revolve around different types of state involvement in economic affairs, rather than being about whether the market or the state should lead a country to wealth and prosperity.

The debate on the respective roles the state and the market should play in economic development has been going on for decades. The free-market, neo-liberal view, and that favoring a more interventionist state, has been among the most influential and visible in the debate. These opposing views are especially interesting in light of the experiences of the East Asian “miracle” economies, which in the eyes of many proved that the neo-liberal approach to economic development was not the best for developing countries to follow. This debate might not be as relevant today as it was in the 1980s and 90s, but it is useful to take it into consideration when analyzing state involvement in the economy. It has influenced policy makers and scholars, as well as the advice given to developing countries looking to prosper economically. When studying China, it is hard to overlook the experiences of its neighboring East Asian countries. These countries learned much from experimenting with economic policies, and have influenced China’s economic policies to at least some extent.
In the 1950s and 60s, the view on how underdeveloped states could achieve economic growth was dominated by structuralist theories. Many saw the state as an important factor that needed to intervene in the economy and repair market failures. The ideas of scholars such as Alexander Gerschenkron and John M. Keynes were given much attention - ideas prescribing the need for government interventions in developing countries in the case of Gerschenkron, and in developed countries in the case of Keynes. By the early 1970s, free-market theories gained momentum as many Latin American countries failed to develop despite an activist state. However, as the decade came to an end, the success of the East Asian “miracle” economies in turn presented a challenge to such theories (Chu 1997: 3-4; Wade 1990: 8-10).

2.2.1 The Washington Consensus

After the failures in the economic policies of many Latin American countries, the Washington Consensus gained momentum in the 1980s. It prescribed policies for developing countries seeking to achieve economic growth, strongly supporting the free market and a non-interventionist state apparatus. The term is a reference to the city where such institutions as the World Bank, the International Monetary Fund (IMF), and the U.S. Treasury Department are located (Oatley 2012: 150). From the 1970s, the Bretton Woods-esque policy recommendations of the Washington Consensus dominated economic policy in developing countries. The main elements of the Washington Consensus were that economic development best could be achieved if the market were given the chance to operate freely, with a government mainly limiting itself to such tasks as providing infrastructure, securing law and order, and ensuring a stable macroeconomic environment. State intervention was mostly seen as something negative, and market failures were deemed less harmful than failures by the government. A key idea was that developing countries had to “get the prices right” and that politicians concerned about their own interests, leading to corruption and rent seeking, had to be restrained (Onis and Senses 2005).

In the beginning of the 1990s, the ideas associated with the Washington Consensus were starting to lose support. The empirical evidence did not support the fundamental idea that complete market liberalization would lead to economic growth. A country like Argentina adhered to the neo-liberal policies of the IMF, but after a period of success found itself in a major economic crisis at the beginning of the 21st century (Onis and Senses 2005: 269). The
East Asian and Latin American financial crises at the end of the century did not exactly strengthen the theories of the Washington Consensus, and many of its policy recommendations, such as reliance on foreign capital, were discredited. For many developing and middle-income countries, it was problematic that they opened up to financial liberalization, due to pressure from international institutions, before they had the necessary macroeconomic stability in place (Birdsall and Fukuyama 2011; Onis and Senses 2005).

### 2.2.2 The East Asian “Miracle”: Growth With an Interventionist State

The experiences of the East Asian Tigers from around the 1970s onward showed that development strategies other than those recommended by the Washington Consensus had to be taken into consideration. Countries such as South Korea, Singapore, and Japan, as well as the Chinese areas of Hong Kong and Taiwan, managed to achieve astonishing rates of economic growth in the 1970s-1990s (Birdsall and Fukuyama 2011). The East Asian “miracle” has been intriguing to economists and political scientists over the past decades. Not only did the East Asian countries experience economic growth at unprecedented levels, but also the way they did so were contrary to many of the dominant theories on economic development at the time. Additionally, the economic growth in East Asia happened at a time when the majority of developing countries experienced a slower rate of economic growth than high-income countries (Kwon and Kang 2011).

Neo-liberal scholars claimed the achievements in East Asia were the results of free-market and outward-oriented policies, pointing to how developing countries with protectionist economic policies were less successful (Birdsall and Fukuyama 2011). On the other hand, many experts have argued that the East Asian “miracle” specifically proved that neo-liberal policies were not working and not the best strategy for developing countries to follow. The World Bank published the report “The East Asian Miracle: Economic Growth and Public Policy” in 1993 with the goal of proving the correlation between neo-liberal policies and economic success in East Asia, a report that has been the subject of much debate and scrutiny (Onis and Senses 2005: 266; Tenold 2012: 64). In many respects, the way the report explained how the newly industrialized countries had achieved economic growth was more balanced and moderate than what the World Bank had typically preached. Although crediting the East Asian governments in no way was groundbreaking in itself, the source it came from was somewhat surprising. The report acknowledged that the high-performing Asian
economies did have extensive government interventions, and that it might have been a factor contributing to the high economic growth rates (Evans 1995; Rodrik 1994). The East Asian governments got the fundamentals right, and created a stable macroeconomic environment with low inflation and small fiscal deficits, while they at same time enjoyed political stability (Chang 2006; Page 1994). Total factor productivity was high and they managed to utilize their resources in a much better way than what had been evident in other developing countries. They became internationally competitive and took advantage of foreign technology and knowledge that had already been developed in the West. This rapid growth was combined with a high level of income distribution, so that bigger parts of the population were able to reap the benefits of the economic growth (Page 1994; Perkins 1994; Wang 2011).

Neo-liberal theories have to a bigger extent been utilized as an explanation for economic growth in the Tiger economies than in China, because China developed at a later stage when the ideas of the Washington Consensus had been criticized and somewhat discredited. This does not mean that explaining China’s economic development is an easy feat, and there is far from consensus on this topic among scholars and economists. China is much bigger in both population and size than the East Asian Tigers, has a greater potential, and is a more powerful player in the world economy today than South Korea or Japan ever were. Hence one should be careful when trying to analyze China in light of what the East Asian “miracle” economies achieved. China represents something quite unique and this should be kept in mind. However, there are also similarities between the developments of the East Asian Tigers and China, and one can draw on some of the experiences of the former when analyzing the latter. The experiences of the Tiger economies have likely had at least some influence on China’s past economic policies.

Baek (2005) argues that China’s economic development does have features in common with an East Asian Development Model, and others argue that China is best explained in light of the earlier developers in East Asia (Kwon and Kang 2011). Many of the typical features of the EADM have been important in China, such as a reliance on export, imports of foreign technology, investments in research and development (R&D), an abundance of cheap labor, and “getting the prices wrong” (Kwon and Kang 2011). Exports created profits, but it was also important to export in order to be able to import. Exports generated revenue of foreign currency, enabling the import of components necessary in the production of exports. Both the Tigers and China had high levels of investments and savings, promoted general and selective
industrial policies, and relied on central planning. There was also a shared focus on a stable and reasonable macro-economic environment (Baek 2005; Tenold 2012).

2.2.3 No East Asian “Miracle” at All?
Some seem to prefer that a certain path to economic growth should be adopted by developing countries, regardless of unique and country-specific conditions. Not everyone agree that such concepts as the East Asian “miracle” or the Washington Consensus can be applied to developing countries in general. Economists such as Paul Krugman, among others, have opposed the entire notion of an East Asian “miracle”. Instead of prescribing a certain strategy for development, it is argued that what happened in East Asia was simply the result of an increment in labor and capital, two important factors in economic development (Tenold 2012: 66). Ranis (1995) argues that both the free market and government interventions contributed to the economic development of East Asia. He points to how the labor market was allowed to behave competitively with little government interference. At the same time, the government supported R&D, facilitated infrastructural development, reduced transaction costs, and strengthened intellectual property rights, but managed to stay flexible in reform implementation, letting the free market operate to a necessary extent.

2.2.4 Rejecting General Development Strategies
Gerschenkron rejected the notion that different cases of development should be viewed in light of the same set of existing conditions. As opposed to those claiming that a certain strategy is the most efficient for economic development, he argued that countries could not replicate the development process of other countries (Hobday 2003: 294). Developing countries, or latecomer economies, had to take into account the experiences of others, while at the same time follow their own path. The unique conditions of “backward” economies should determine the state’s role in areas such as technology development, institution building, resource mobilization, and so on. According to convergence theory, backward economies have a huge potential for rapid economic development. They can utilize already developed technologies, and the larger the gap between the developed and the developing countries, the bigger the potential for growth in productivity. Given that certain conditions are in place, the laggard economy will grow faster than those more developed, and converge towards their level of development (Abramovitz 1986; Abramovitz and David 1996).
Evans (1995: 11) has also argued that developing countries should not follow a certain standardized, ideologically influenced development strategy, stating that “different kinds of state structures create different capacities for action. Structures define the range of roles that the state is capable of playing. Outcomes depend both on whether the roles fit the context and on how well they are executed”. It might be more fruitful for the developing countries of today to draw on the experiences of other countries, trying to extract the positives and avoid the negatives, while simultaneously taking into consideration their unique conditions, resources, and historical and cultural backgrounds.

2.2.5 “Embedded Autonomy” in East Asia

There is no denying the fact that some East Asian countries have achieved tremendous rates of economic growth over the past decades. As the discussion so far in this chapter has shown, one should be careful in trying to explain the East Asian growth experience with ideologically grounded theories supposed to fit a number of countries with entirely different starting points.

That being said, is it possible to point to some main reasons behind the economic growth of the Tiger economies? One can point to the increment in capital and labor, like Krugman has. Evans (1995) claims a state might be labeled “developmental” when “embeddedness” and “autonomy” are combined. The state needs autonomy in order to discipline the private and the business sectors. This includes a bureaucracy being insulated enough to performs its tasks on behalf of the state, while at the same time being sufficiently competent. It must be able to perform its responsibilities and withstand pressure from private businesses, lobby groups, and other actors with differing interests. However, such insulation and capacity without concern for private actors is probably not ideal either, and there needs to be a connection between the state and the private sector, with information flowing between the two (Chu 1997: 9).

“Embedded autonomy” might be one common factor in the economic growth of different East Asian countries. The state recruited some of the brightest minds to their bureaucracy, provided capital and helped private firms to compete in international markets, and was assisted by elite economic policy organizations (Evans 1995). Their bureaucrats were not rent-seekers, but rather skilled managers of industrialization, and the government was quite selective in its interventions in the economy (Chang 2006; Zweig 2002). Although China is
not specifically mentioned, I would argue that much of this embedded autonomy has been evident in China, too.

2.3 Technological and Industrial Catching-up: Following or Defying Comparative Advantages?

As opposed to developed countries, developing countries will typically have a factor endowment structure where unskilled labor, and sometimes natural resources, is relatively abundant, coupled with a scarcity of capital. The abundance or scarcity of land and natural resources are usually given, as it is hard for a country to increase its geographical size (Lin 2007; Lin 2012). It can be argued that the abundance of natural resources may be increased, but generally, this factor endowment is also static. The natural factor endowment structure of a country can say something about in which types of industries it will have a comparative advantage. According to the theory of comparative advantage, the endowment structure of developing countries is the reason why following a development strategy with the aim of upgrading capital-intensive industries is ineffective and not the best way to develop. However, not everyone agree with the theory of comparative advantage, claiming countries will have to strategically defy its comparative advantages in order to develop.

There are different ways to interpret what a country should do in order to upgrade its industrial structure, and how much it should follow or defy its comparative advantages. Justin Lin lays out two opposing development strategies: the comparative-advantage-following strategy and the opposing comparative-advantage-defying strategy (Lin 2007: 26-39). While Lin is clearly a supporter of a CAF strategy, Ha-Joon Chang is an economist supporting a CAD strategy. Obviously, he does not claim that developing countries should follow an all-out, highly comparative-advantage-defying development strategy like China under Mao or the Soviet Union did – but he is nonetheless more supportive of a government that strategically defies its natural comparative advantages at a certain point in time. I will use these two recognized economists as representatives of the two views, in order to illustrate the differences between them.
2.3.1 Lin: Development Through a Comparative-Advantage-Following Strategy

For Lin, the starting point in a developmental analysis is a country’s factor endowment structure, because it represents the current total budget of the economy. It also illustrates the relative prices of different production factors, determining in which industries a country has a comparative advantage. In a CAF strategy, the factor endowment structure must be upgraded in order to improve the industrial structure of a country. For a developing country, this usually means increasing the abundance of capital. This is opposed to a CAD strategy, where the government tries to artificially upgrade the industrial structure. According to Lin, firms will be most competitive if they enter into industries that are in accordance with the country’s factor endowment structure, and thus their comparative advantage, at a given stage of the development process (Lin 2007; Lin 2012; Lin 2013A).

A well-functioning market is a necessary condition if a country is to develop in line with its comparative advantages. As this is often missing in a developing country, the government has to create and promote it instead. With a functioning market, relative prices will reflect relative scarcities of the economy’s factors of production, causing enterprises to use efficient technologies in efficient industries consistent with their comparative advantages. This will create profitable firms and increase the abundance of capital, thus altering the existing factor endowment structure and creating comparative advantages in new industries. Existing technologies will no longer be optimal and most cost-efficient. This should make enterprises implement more capital-intensive technologies in order to stay competitive and adhere to their new comparative advantages, causing a technological upgrading. More advanced technologies will in turn create bigger profits and increase capital resources, resulting in a continuous upgrading of the factor endowment structure (Lin 2007; Lin 2011; Lin 2013B).

While a CAF strategy is centered on businesses moving into those industries where they have a comparative advantage at a given point in time, the government does play a role in this strategy. It should take on the tasks of information collection and coordination, as well as compensating for externalities. It should collect information because it is expensive for private companies to do so, but distributing it is cheap. Furthermore, it should coordinate private investments and the construction of infrastructure, and other elements vital for development. Pioneer companies can provide information through trial and error, and the
government should subsidize them due to the costs associated with being the first to enter a new industry or utilize more advanced technologies. In order for the state to perform these tasks, it will need centralized institutions with the power to organize, coordinate and enforce (Lin 2011; Whittaker, Zhu, Sturgeon, Tsai, and Okita 2007).

Infant-industry protection of firms in sectors where the country doesn’t enjoy a comparative advantage has no place in a CAF strategy. Because these sectors are not likely to be profitable in the short run, the government will eventually have to draw resources from firms that operate in industries where they do have a comparative advantage. This will slow down the accumulation of capital and the upgrade of the factor endowment structure, halting the development process (Lin and Chang 2009).

2.3.2 Chang: Development Through a Comparative-Advantage-Defying Strategy

As opposed to Lin, Chang believes developing countries have to deliberately and strategically violate their comparative advantages, due to the lack of free markets and their use of tariffs and quantitative protections (Chang 2006). In order to upgrade its industrial structure, a country has to defy rather than follow its comparative advantages. Chang and Lin agree that late developers can catch up with earlier developers by importing more advanced technologies that they do not possess themselves, and that this is an advantage backwards countries can exploit.

Chang favors infant-industry protection and claims it was an important part of the East Asian economic success. Because firms in developing countries will have to compete with already established companies from developed countries, they cannot survive and has to be protected from international competition by the government until they are able to compete. However, in order for such a strategy to succeed, the developing country needs to combine it with an export-promoting strategy. Exporting goods will accumulate the necessary capital that allows infant firms to acquire new and more advanced technologies that they cannot develop themselves. This is especially important if a country lacks capabilities in R&D, something many developing economies do. At the same time, long-term success in the export of goods requires that new industries emerge and that a country’s exports stay competitive. Hence, infant-industry promotion and a successful export sector are mutually interdependent (Chang 2006).
One of Chang’s main points is that it is impossible for a developing country to upgrade its existing technological structure without defying its comparative advantages and entering an industry before the factor endowment structure has been naturally upgraded to an ideal level (Lin and Chang 2009). Chang do believe a country can “pick winners”, meaning backing a firm in order to make it successful. He uses POSCO, the steel-producing company from his native South Korea, to exemplify this. South Korea was a dirt-poor country when it planned to build a steel mill in 1965. Succeeding in a capital-intensive industry like steel production should not have been possible according to the theory of comparative advantage.

Additionally, South Korea did not produce the necessary raw materials needed for steel manufacturing, and had to import it from far-away countries, something that should have made the establishment of a successful steel producing company even harder. POSCO was also a state-owned enterprise (SOE), something neo-liberal economist claim to be inefficient, led by a former military general. Given these conditions, nobody wanted to invest in the company, but South Korea managed to get financial help from Japan. Eventually, POSCO became a massive success, and other East Asian countries also managed to successfully pick winners (Chang 2010).

Chang does not entirely discard the theory of comparative advantage. Evaluating comparative advantages can say something about the sacrifices a country must make when promoting and developing infant industries. This information can be used by the developing country to avoid excessive infant-industry protection that ends up hurting rather than promoting economic growth. One of Chang’s objections to the theory of comparative advantage is that it’s a static concept. It can say something about how much a country can gain by specializing in industries according to its current factor endowment structure, but not how it can improve its situation over time. While it might illustrate what the country is losing by protecting industries at a certain point in time, it does not show the future positive or negative outcomes of such protection. In his view, one has to ignore comparative advantages initially, causing a loss of revenue in the short run, in order to develop new industries that will be profitable further down the road. In addition, Chang argues that much technological capacity is generated through experiences in new industries, and that in order to improve its technology, a developing country will have to enter a new industry before the factor endowment structure has been sufficiently upgraded (Chang 2006; Lin and Chang 2009).
Later in this thesis, I will use the theoretical framework laid out above to evaluate whether China’s attempts at industrial upgrading has resembled a CAF or a CAD strategy the most.
3 Export-Processing Zones: Their Purpose and Contributions to Economic Growth

Chapter Outline
This chapter presents a background to the first analytical chapter concerning China´s SEZs. Understanding EPZs is necessary because they influenced the creation of similar zones in China. The chapter starts off by defining EPZs and explaining their purpose. It goes on to discuss how such zones can positively or negatively contribute to its host economy, before looking at the role of government in EPZs.

3.1 Export-Processing Zones as Instruments for Economic Growth
When China embarked on its Open Door policy in 1979, several Special Economic Zones were created in the coastal areas of the country. These were modeled after similar zones elsewhere in East Asia, and their purpose was not only to create export-oriented growth, but also to function as laboratories for a new economic system. Different types of EPZs have been tried out in a number of countries, and been given various titles. Despite different names, such zones have many common features. They are industrial enclaves in a country, established with the aim of opening the domestic economy up to international markets. There is often a desire for a thriving exporting sector, and investments and inflows of foreign currency and FDI are important. The host government of such zones provides special incentives that are generally not available for companies operating outside them. This includes tax breaks, preferable duties on imports, soft regulations on labor and capital, good infrastructure, access to resources, and cheap land rent (Amirahmadi and Wu 1995; Ge 1999).

Defining Export-Processing Zones
The World Bank has defined EPZs as “fenced-in industrial estates specializing in manufacturing for exports that offer firms free trade conditions and a liberal regulatory environment” (1992: 7, as cited in Madani 1999: 5). This definition is useful because it captures some of the most important elements of EPZs in one sentence. However, not only
the desire for an increased export sector has led states to establish such economic enclaves. Also a desire for spillover effects to the economy as a whole, as well as an upgrade of technology and human capital, has been important reasons behind establishing EPZs. Thus, the label “export-processing zone” might be somewhat misleading as other elements than just exports have been important in such zones. An EPZ can perhaps be more broadly defined, but it is more important that one pays attention to the different aspects of EPZs and the reasons why they were created, rather than how they are defined. After something of a modern revival in the 1950s, EPZs were only present in a few countries up until the 1970s. Their popularity as a policy instrument grew in the following decades, reaching a global total of 500 in 1996 (Madani 1999: 5).

3.2 The Purpose of Export-Processing Zones

Export zones are attractive to developing countries. Establishing such zones is a good way to attract FDI and they provide an opportunity to enter international markets. They might represent the “second best alternative” to reaching such goals, after completely opening up the economy as whole (Amirahmadi and Wu 1995: 831-832; Luo 2001: 9). In addition to creating inflows of FDI, other reasons for establishing EPZs are increasing revenues of foreign exchange, facilitating transfers of technology and know-how, increasing the skills of the labor force, promoting non-traditional exports, upgrading the existing industrial system, generating employment, and creating backward linkages and spillover effects to the rest of the economy (Johansson 1994; Kusago and Tzannatos 1998; Madani 1999).

EPZs can be considered policy tools in a transitional economic phase, as their relative importance will decline with the development of the host country and the liberalization of its economy and trade system. Establishing EPZs is less risky than entirely opening up the economy. With China’s closed economy at the time it launched its economic reforms, it was important to maintain control over foreign investments and their influence on the economy. This was done through limiting the economic experiments to certain small areas. Although an important purpose of EPZs is promoting exports, one should not forget the role played by imports. In China, it has been argued that the SEZs actually were more important as import-processing rather than export-processing zones (Amirahmadi and Wu 1995).
Providing Special Incentives
In order to attract foreign corporations to the EPZs, they have usually been given several incentives. This included benefits such as duty-free or favorable duties on necessary imported components, tax concessions, cheap rent and land lease, better infrastructure than in the rest of the country, and flexible labor regulations. In addition, firms could take advantage of the cheap labor offered in the EPZs (Kusago and Tzannatos 1998; Madani 1999; Wong and Chu 1984).

3.3 EPZ Influence on the Host Economy: Positive or Negative?
Today, many years after the first EPZs were established, there are lots of available data and information about the performance of EPZs, and how they might positively or negatively influence their host economies. As many export zones no longer play a vital role in their economy, the debate on their contributions to the host economy might not be as relevant today as it once was. At the same time, developing countries in Africa are experimenting with EPZs, drawing on the experiences of China (Lin and Wang 2008: 5). Thus, understanding the role such zones have played is important to policy makers in many developing countries of today.

Three Views on EPZs
Traditionally, three main views on EPZs can be identified: studies grounded in neo-classical theory tended to conclude that EPZs reduced the welfare of their host countries. The cost-benefit approach to studying EPZs stated that this critique was unjustified, and that the impact of an EPZ on its host country’s welfare could be positive. New growth theory has argued that the neo-classical take on EPZs overlooked the importance of spillover effects, and failed to take it into account when claiming that EPZs negatively affected their host economies (Johansson 1994).

3.3.1 Potential Positive Contributions
An EPZ can contribute positively to its host economy in a number of ways. It might increase the exports of manufactured goods and attract greater inflows of foreign capital and FDI. The implementation of foreign technology and managerial skills can upgrade the industrial
The presence of foreign firms in EPZs can upgrade the quality of labor if workers are given the opportunity to work with better machinery, more advanced production processes, and perform more challenging tasks than they else would have done. However, the tasks performed by local labor are often simple and low-tech, requiring limited amounts of skill. Thus it is debatable how much the skills of local workers really improve. At the same time, local workers might still benefit from learning about production processes, routines, and other elements where foreign firms have better practices. If management responsibilities are given to local workers, this is also something that can help them acquire new skills. Wages in EPZs are usually equal or higher than in the domestic job market outside the zones, and the presence of foreign competitors might indirectly increase the quality of the labor force if indigenous firms are forced to teach their workers new production methods (Madani 1999).

3.3.2 Potential Negative Contributions

It is also possible to argument against the use of EPZs. Neo-classically grounded arguments against EPZs have been put forth, such as a lower rate of profit in the zones than in protected areas, and that EPZs actually discourage FDI inflows (Johansson 1994: 393). It might also be questioned whether the effects of backward linkages are very substantial, and if the quality of the labor force will increase by much given the fact that most foreign companies are likely to move their simple and labor-intensive activities to such zones (Oborne 1986: 79). Foreign companies often conduct their advanced operations such as R&D at home and not in the developing country, in order to protect their technological advantage (Amirahmadi and Wu 1995: 845). Despite the positive contribution of higher wages in the zones, there is a possibility that foreign corporations attract the best workers from outside the zones, causing a brain drain from already less developed areas. When developing an EPZ, the host country has to take into account the huge infrastructural costs associated with its establishment, as well as
the tax and tariff revenues it will lose out on due to the incentives and economic rebates given to foreign firms (Madani 1999).

While it can be argued that a developing country’s limited resources should be aimed at only a small number of areas, one might also claim that due to the interconnectedness between a country’s industries and regions, it is better to focus efforts at industrialization on several areas at once. By attempting to upgrade one area first, economic differences between regions are likely to occur (Wei 2000). This has been evident in China where the Eastern part of the country is more developed than other regions. Looking at negative consequences behind those related to economics, it is a possibility that the low regulations on labor rights in the zones might hurt its workers even though their wages might be higher than in alternative jobs. Environmental issues might also surface, perhaps not in the immediate future after the establishment of the EPZ, but further down the line.

Arguments against EPZs based on neoclassical theories have been put forth. Hence, one could assume that the creation of EPZs is contrary to a CAF strategy. However, Lin (2014) states that special zones and industrial parks might be used as a tool to reduce transaction costs. He claims that most such zones have failed due to high factor costs related to the government’s desire to develop industries where it did not have a comparative advantage.

**Illustrating Positive and Negative Contributions by EPZs**

Based on the arguments laid out above, arguments for and the corresponding arguments against the use of EPZs are summarized in the table below.
Table 1: Arguments for and Corresponding Arguments Against the Use of EPZs.

<table>
<thead>
<tr>
<th>Arguments for the Use of EPZs:</th>
<th>Arguments Against the Use of EPZs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater inflows of FDI and foreign currency</td>
<td>Neo-classical argument that EPZs actually decrease FDI</td>
</tr>
<tr>
<td>Transfer of foreign technology</td>
<td>Most R&amp;D undertaken in the corporation’s home country; not necessarily great technology transfers</td>
</tr>
<tr>
<td>Increase managerial skills</td>
<td>Such increased skills might not be put to use outside the EPZs</td>
</tr>
<tr>
<td>Backward linkages and spillover effects to the</td>
<td>Neo-classical argument that spillover effects are overestimated.</td>
</tr>
<tr>
<td>host economy as a whole</td>
<td>Economic activity mainly confined to the EPZs</td>
</tr>
<tr>
<td>Allow the host country to conduct controlled</td>
<td>Activities in EPZs are often very different from the rest of the country, might not be very</td>
</tr>
<tr>
<td>economic experiments</td>
<td>valuable</td>
</tr>
<tr>
<td>Increased wages and higher living standards</td>
<td>Low labor regulations, workers might not be allowed to organize</td>
</tr>
<tr>
<td>Increased employment opportunities</td>
<td>Drawing workers from outside the zones, creating a brain-drain from already backward areas</td>
</tr>
</tbody>
</table>

3.4 The Role of Government in EPZs

Although the role of government in EPZs might differ from one zone to another, it seems plausible that the government of the host country have to undertake at least a minimum of actions. When a zone is initially established, it is natural that the government of the host country facilitates its creation. It might study the possibilities of establishing a zone and the potential consequences of doing so. It will probably also have to set up a legal and bureaucratic framework, as well as get the private sector involved (Madani 1999). In order to attract foreign enterprises, the government might have to provide economic incentives of the kind outlined earlier in this chapter. In the Chinese SEZs, originally located in backward and underdeveloped areas, massive infrastructural upgrades were required. As the EPZs are not likely to be profitable right from the start, the government might also need to cover substantial parts of the early costs of running the EPZ. Some revenues and costs associated with EPZs are illustrated below.
Table 2: Government Revenues and Costs Associated With EPZs.

<table>
<thead>
<tr>
<th>Government Revenues From EPZs:</th>
<th>Government Costs of EPZs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential revenue from corporate tax</td>
<td>Loss of revenue due to economic incentives</td>
</tr>
<tr>
<td>Revenue from exports</td>
<td>Cost of imports</td>
</tr>
<tr>
<td>Increased inflows of FDI</td>
<td>Costs of building infrastructure</td>
</tr>
<tr>
<td>Permit fees and charges in the EPZ</td>
<td>Increased costs of administration</td>
</tr>
<tr>
<td>Import duties</td>
<td>Subsidies</td>
</tr>
<tr>
<td>Sale of land</td>
<td>Environmental costs</td>
</tr>
</tbody>
</table>

Source: Akinci and Crittle 2008: 33.
4 Developments in the Chinese Economy Under Mao

Chapter Outline
This chapter is about the state of the Chinese economy under Mao Zedong, the leader of China prior to Deng Xiaoping. It evaluates the choice of development strategy, and the main reasons why it failed to achieve economic growth. It is important to recognize the developments under Mao if one wants to understand the economic reforms launched by Deng, and why they were so groundbreaking.

4.1 The Choice of Development Strategy
When the People’s Republic of China was established under the leadership of Mao Zedong in 1949, it was a backwards, agrarian country. China lacked capital and faced isolation from the international community. The regime chose to follow a “big push” industrialization strategy centralized around a planned economy and the development of heavy industries. The vast majority of investments in China at the time came from the government, with the aim of rapidly industrializing the country (Headey, Kanbur, and Zhang 2008; Lin et al. 2003; Lin 2012; Naughton 2007). The choice of development strategy was not unique. Many countries have tried to achieve economic growth through import-substitution industrialization and heavy-industrial development after World War II. The desire for a powerful military and national defense did likely affect China’s choice of development strategy. Essentially, without a strong military able to defend the country, China was not secure. Mao’s China faced a potential conflict with Taiwan and had to consider what was going on at the Korean peninsula. Western capitalist countries isolated China economically and imposed sanctions on trade so it had to develop its own comprehensive industrial structure in a short period of time (Lin et al. 2003; Lin 2007).

4.1.1 The Soviet Union as a Role Model and a Focus on Heavy Industry
The Soviet Union acted as a role model for China. The two countries shared similar initial conditions at the start of their development, both being backwards, communist, and agrarian economies. U.S. and Western hostilities towards China also made it turn to Soviet for aid in
reconstructing the country. The Soviet Union did enjoy some initial success in the development of its heavy industries (Howell 1993: 46; Lin 2012: 70). Chinese leaders did not believe the internal market was big enough to profitably and fruitfully develop light industries, and that the development of heavy industries could help China overcome the issues of limited demand and a lack of capital. The idea was to skip the stage of developing light industries and go straight to the development of heavy industries. Mao wanted to rebuild the Chinese economy from scratch while focusing on central planning and control, state ownership, political loyalty, and agricultural collectivization, while eliminating the private sector (Lin et al. 2003; McKenney 1993).

Mao himself stated: “without heavy industry there can be no solid national defense, no well-being for the people, no prosperity and strength for the nation” (Zedong 1945, as cited in Lin 2007: 18). Hence, one important reason for developing heavy industries was likely to build up defensive capabilities. China wanted to achieve maximum growth in its industrial and military capacity as fast as possible (Naughton 1995).^4

To a big extent, China lacked the essentials for a successful development of heavy industries at the time, such as capital and foreign exchange, an economic surplus, and the capacity to export (Naughton 1995). As the market could not facilitate its development, the state had to do it instead. Interest and exchange rates were high, making the development of capital-intensive industries expensive, while the cost of labor was low. China’s development strategy in the 1950s has been labeled a “leap-forward strategy” due to the large gap between the developmental goals and the reality of China’s situation at the time (Lin et al. 2003: 39-40). China under Mao sought to develop while ignoring its comparative advantage in labor-intensive industries. The economic growth was less than what it could have been, and SOEs were highly inefficient with workers lacking the incentives to perform (Bjerkholt 2012; Headey et al. 2008; Lin et al. 2003).

With a huge agricultural sector and a scarcity of capital, why did Chinese leaders choose the heavy-industrial developmental path? Mao stated in 1944 that the country’s backwardness

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^4 Mao was not the first Chinese statesman to consider this strategy. Sun Yat-sen, “the father of modern China”, focused on the development of basic, key industries in his plan for Chinese industrialization in 1919 (Lin 2007: 19).
was due to the lack of modern industries, and that the Chinese people would not support the party if it did not manage to build up its industries, enhance productivity, and solve economic issues. The new Chinese republic’s 1st Five-Year Plan (FYP) in 1953 clearly laid out the goal of developing heavy industries as the core of industrialization, and this was supposed to be the backbone of the socialist industrialization. Hairy goals were set, and China was to exceed the industrial power of Great Britain within ten years and catch up with the U.S. within 15 (Lin 2007: 20-21). It is hard to categorize the Mao-era as something distinct, because the policies were altered many times. In some periods, it was a uniquely “Chinese” or “Maoist” model, other times it resembled the Soviet system to a bigger extent. Mao changed the course of the economy several times, according to his personal ideas and beliefs, or based on who his personal enemies were (Naughton 2007).

4.1.2 The Great Leap Forward and the Cultural Revolution

China paid dearly for some of the catastrophic economic policies under Mao. In 1958, Mao launched the disastrous Great Leap Forward, with the aim of reaching unrealistic levels of industrialization and agricultural development (McKenney 1993: 3). Despite a great autumn harvest in 1958 and a rapid increase in steel production, the Great Leap turned out to be anything but great. The leadership made two devastating decisions: they reduced the supply of resources needed for production in the agricultural sector, and increased the government’s share of procured grain. The pursuit of industrialization continued with output targets raised again and again, and resources and manpower were drawn away from agricultural production. In the 1960s, China experienced a serious shortage of food, and a full-blown famine soon ensued, mainly in the rural areas of China. The state continued to extract food from the countryside and provide it to urban areas, in order to keep up the appearance of normality. Some authors claim this three-year famine caused the death of 30 million people, but it is impossible to know exactly how many Chinese lost their lives during this experiment (Lin et al. 2003: 57-58; Lin 2012: 88). In the end, the Great Leap Forward caused a one-third decline in China’s GDP, and much industry was seriously distorted. In 1961, the experiment ended, and the worst part of the famine was over in 1962 (Naughton 2007; McKenney 1993).

In the aftermath of the failed Great Leap Forward, a series of reforms were implemented in order to restore the economy over the next five-year period. Deng played a role in the economic restructuring, and improvements were made on both social and economic matters.
Mao launched another ambitious project in 1966, which also turned out to be catastrophic: the goal of the Cultural Revolution was to transfer power to the people from the cultural and political elites, and the Red Guards, composed of students, were encouraged to overthrow the leaders of the CCP (but not Mao himself, obviously). Deng was among those criticized and stripped of his power. It created an isolationist economy where both imports and exports were outlawed. Foreign trade continued, but on a much smaller scale. Despite this, the economic consequences of the Cultural Revolution were actually not as big as one could assume. Agricultural production and industrial output were less distorted than during the Great Leap Forward (Howell 1993; McKenney 1993; Naughton 2007).

4.1.3 Achieving Growth Despite a Failed Development Strategy

Despite promoting industries where it lacked the fundamentals for success, China’s economy did grow quite substantially from 1952 to 1978. Its GDP grew at 6 % per year, more than the world average and almost as much as South Korea and Taiwan. Industrial output grew at 11.5 % annually in the same period (Bjerkholt 2012: 49; Lin et al. 2003: 70; Naughton 2007). As I have pointed out earlier in this thesis, one should not readily accept official Chinese statistics. Even if the 6 % annual GDP growth was real, this is not unnatural considering the enormous investments undertaken by the government. This jump-started the economy after a period of stagnation, but it is hard to assess how much it actually positively contributed to the economy, because much of the economy was highly inefficient. Heavy industries increase demand from other heavy-industrial sectors and developing such industries can create economic activity, but it does not create many spillovers. China’s starting point with a very small economy made relative levels of high growth easier than for countries with bigger economies, and much of the economic growth came from investments in heavy industries (Lin et al. 2003, Naughton 2007). This points to the importance of a qualitative research approach when studying phenomena like economic growth processes, because the reality is not necessarily as straightforward as it initially might seem.

As China followed a heavy-industrial-developing strategy, it was natural that some industries grew at a much higher rate than others. Those sectors promoted by the state reached higher levels of growth, while the agricultural and tertiary sectors grew slower, creating uneven and not substantive economic growth. In addition, this growth did not lead to a big improvement in the living standards of the Chinese. Although the inefficiencies of the Chinese economic
system were recognized in the 1960s (Lin et al. 2003), it was not until Deng came to power and launched economic reforms in 1978 that things really started to change.\footnote{It has been argued that Deng was not always a proponent of market-oriented economic reforms, just waiting for the chance to turn China capitalist, as he is sometimes portrayed (Naughton 1995: 62).}

4.1.4 The Death of Mao and the Emergence of Deng

Deng was eventually brought back to the national leadership, but things once again got chaotic when the Gang of Four came onto the scene in 1974. After a campaign against Deng two years later, he was again thrown out of his position of power (Howell 1993: 47). When Mao died in 1976, the ten years of chaos created by the Cultural Revolution finally ended, having pushed the economy to the brink of collapse (Howell 1993: 64; Lin et al. 2003: 139). While the economy at the time was in a sorrow state, it still had potential for growth. The initial response in the aftermath of Mao was to rebuild the old economic system, and the Chinese economy actually moved towards that of the Soviet Union in 1977 and 1978 (Howell 1993: 48; Naughton 1995: 64-65). The rebuilding of the former planned economic system was combined with a desire for economic growth, something that was unrealistic. Re-establishing the former system turned out to be more difficult than some had anticipated, and the ambitious Ten Year Plan established in 1978 collapsed the same year. Thus, it seems like China’s leaders had not learnt much from their previous experiences with a planned economic system. The influence of those wanting reform, among them Deng, were growing, and eventually led to the consolidation of Deng as China’s new leader (Howell 1993; Naughton 1995).
5 The Chinese Economy Under Deng

Chapter Outline
This chapter evaluates the developments in China´s economy after Deng Xiaoping came to power. He became the leader of China a few years following the death of Mao and implemented drastic reforms. The results have been highly successful. The chapter starts off considering the first reforms launched by Deng. It explores how the Chinese economy took off through an export-led growth strategy, and the reasons why the reforms were carried out. After this, it is attempted to illustrate the changes in the Chinese economy through the use of some main economic indicators.

5.1 Deng´s Initial Economic Reforms
While China´s economic performance over the last decades has been spectacular, problems related to both its economy and other areas of society persist. However, one has to keep its starting point in mind, and acknowledge just how far it has come in less than forty years. When Deng came to power, China´s economic conditions were unfavorable after years of failed policies. At the Third Plenum of the 11th Central Committee Congress in December 1978, Deng became the leader of China. This was perhaps the single most important happening in the transition to a new economic system (Naughton 2007).

Deng thought that mastering science, technology and management were necessary if China was to prosper (Zweig 2002: 28-29). This was in line with the aim of shifting China´s focus from the existing communist themes of the time to a modernization of agriculture, industry, science, and technology. The so-called “Four Modernizations”6 were meant to turn China into a relatively advanced society by the turn of the millennium (McKenney 1993: 6). Under Deng´s leadership, China moved its focus from heavy to light industries and agriculture. China needed to create more jobs, something it could do by focusing more on industries with bigger needs for manual labor (Naughton 1995). In general, Deng´s return to the political scene marked a change towards a more innovative and exploratory economy, contrasting the

6 The “Four Modernizations” was a term first put forth by Zhou Enlai, and Deng later adopted it (Gross 1988: 24; Oborne 1986: 11).
policies of Mao (Howell 1993). Despite the years of catastrophic economic policies under Mao, China did have a large potential for growth, and some of this potential was released during the first years of Deng’s leadership (Howell 1993; Naughton 1995). As such, a lot of what China needed at the time was probably a pragmatist like Deng, someone who acknowledged China’s unique economic features and was able to do what was necessary to realize its economic potential. His pragmatic take on development is evident in perhaps his most famous quote: “it doesn’t matter if a cat is black or white, as long as it can catch mice, it’s a good cat”. As is discussed in depth later in this thesis, China also launched the SEZs under Deng, an important part of the process of opening up the economy. This led to greater contact with the international markets and introduced capitalism to China. The first reforms were launched in those areas where it was possible to achieve fast gains that benefited the population, and the reform policy gained support from many different groups of society (Knoth 2000).

5.1.1 Early Reforms in the Agricultural and Industrial Sectors
Right from the start of Deng’s leadership, efforts aimed at reforming the industrial sector were undertaken. The autonomy of enterprises was increased, and the market was allowed to play a bigger role. In 1979 it was decided that some enterprises were to be given the possibility of retaining parts of their profits, and the following year it was announced that this was to be expanded to every state industrial firm in China. A price reform was also launched, and the market was allowed to determine prices to a bigger extent, and helped correct price distortions (Luo 2001; Naughton 1995; Riskin 1987). It is probably hard to overestimate the magnitude of such policies in a country ruled by a party with communism as its official ideology. Generally, it seems like China under Deng was less concerned with ideology and focused more on flexibility.

The existing system was resistant to change. The reforms aimed at financial rationalization did not succeed, and many of the initial attempts at reform failed, although the economy had been somewhat decentralized and liberalized. The Chinese non-state sector experienced growth under Deng, and many new private companies were established. This increased the number of products available on the market and created competition for SOEs, something that was probably a good thing given that these were inefficient and needed to adjust to the new economic reality. With the decollectivization of agriculture, rural enterprises finally had a chance to establish themselves, and the number of rural firms and township and village
enterprises (TVEs) grew (Naughton 1995: 137). In order to increase agricultural productivity, the Household Responsibility System (HRS) was implemented in 1979 and completed in 1983 (Lin 1992: 34-36). Farmers were allowed to work on a collectively owned piece of land under the new system. After a certain production quota had been filled, they could keep the rest of what they produced (Alder, Shao, and Zilibotti 2012: 8-9). All in all, the HRS was a huge success, increasing agricultural production between 1979 and 1984, as well as improving the living standard in rural China (Varum, Huang, and Gouveia 2007: 12).

5.1.2 Export-led Economic Growth and Foreign Trade Reforms

Under the leadership of Deng, the Chinese government realized it had to orient its economy outwards. The Open Door policy was to incorporate the Chinese economy with the world markets, and reform the inefficient economic system from the Mao-era. A policy aimed at expanding foreign trade was adopted in 1979 by the People’s Congress (Chow 2007). However, it is important to note that the Open Door policy was not synonymous with trade liberalization. The former sought to attract foreign technology and capital in order to build up the national economy without having to rely on other countries, while the latter is about laying the foundation for free trade through tearing down tariff and trade barriers (Tzeng 1991). The government sought to upgrade China’s industrial structure from labor-intensive to capital-intensive manufacturing with the assistance of foreign technology and investments. Revenues from exports of agricultural products and raw materials could be used to finance imports needed in order to develop other exporting industries. The coastal areas were supposed to be the frontrunners in the export-led growth, where firms would use the earnings created by exports to upgrade their technology (McKenney 1993; Tzeng 1991; Wedeman 2003).

Vital raw materials were directed from the producers in inner China to the exporters on the coast, meaning regional barriers also had to be torn down in order to make the economy more efficient and create successful exporting firms (Wedeman 2003). The labor-intensive industries were to move westward, with the non-exporting regions gradually taking over the responsibility of producing goods for the domestic market. This would enable China to achieve industrial upgrading while at the same time continue to take advantage of its cheap labor (Chow 2007). The activities of exporting firms on the coast were also supposed to create positive spillover effects, because the increased need for raw materials would benefit
the interior regions. Although much credit has been given to the export-oriented development strategy in both China and in East Asia in general, one should not downplay the role played by import substitution. In order to reduce tensions between the Eastern and Western parts of China, as well as decrease competition for the same resources, the Coastal Development Strategy (CDS) was launched in 1988, where exporting firms would start importing raw materials from abroad (Tzeng 2001; Wedeman 2003: 35-37). Under the CDS, export-processing activities on the coast were meant to obtain foreign capital and better technology while expanding the Chinese economy. The interior regions would follow an import-industrialization strategy and produce what the domestic market needed. This would minimize the need for exports and increase China’s trade balance (Tzeng 2001; Wedeman 2003).

5.2 Developments in China’s GDP and GDP Per Capita

There is no denying the fantastic rates of economic growth China has experienced after Deng came to power and opened up the economy in the late 1970s. Perhaps the most fundamental indicator of the size and strength of a country’s economy, GDP, have been steadily rising in China. Obviously, one should be careful when using data and statistics from any source, and perhaps even more so when the source is a government that might have incentives to manipulate statistics. The reliability of official Chinese statistics has been discussed in-depth in chapter 1.

Figure 1: Growth in GDP and GDP Per Capita, Annual %. 1978-2012.

As shown in figure 1, the annual growth in China’s GDP and GDP per capita were rapid after the first economic reforms were implemented. However, the growth rates decreased at the turn of the 1980s, due to Deng’s desire for price reforms and internal divisions in the CCP (Vogel 2013: 469-473). After declining in 1989 and 1990, the high growth was resumed in 1991. The Chinese economy didn’t entirely escape the Asian financial crisis in the late 1990s, experiencing a small dip in its growth. However, when looking at the actual annual growth of GDP and GDP per capita, it is evident that the economy was still growing at a high rate. In the mid-2000s, GDP and GDP per capita grew in double digits, reaching 14.2 % and 13.6 % respectively in 2007. It dipped somewhat after this, but still grew at 7.8 % and 7.3 % in 2012 (World Bank 2014).

The Chinese GDP grew at an average of almost 10 % annually from 1978-2012, while GDP per capita grew at almost 9 % annually in the same period (World Bank 2014). These rates of economic growth are something few, if any countries have been experiencing in the past, or are likely to be experiencing in the future.

As shown in figure 2 below, the size of China’s GDP when Deng came to power was USD 148.2 billion. By 2012, it had risen to a whopping USD 8,227.1 trillion. GDP per capita was a meager USD 155 in 1978; in 2012 it was USD 6,091 (World Bank 2014).

Figure 2: Growth in GDP, Current USD Billion and GDP Per Capita, Current USD. 1978-2012.

5.3 Foreign Trade Performance

China has managed to increase its exports very much during the course of its economic transformation. From 1980-1991, its foreign trade grew at 9.2 % or 12.3 % per year\(^7\), compared to a world average of 5.5 % per annum (Lardy 1992: 695). In the last decade before the turn of the millennium, manufactured exports grew at 16.9 % per year, compared to a world average of 6.4 % (Lall and Albaladejo 2004: 1444). China’s total value of imports and exports grew from USD 20.64 billion in 1978 to USD 2.97 trillion in 2010 (China Statistical Yearbook 2011: 220, table 6-3).

Like China’s GDP and GDP per capita, the import and export of goods and services as a percentage of GDP has risen drastically in the period 1978-2012. From a starting point of 7.1 % for imports and 6.6 % for exports, they rose to 24.5 % and 27.3 % respectively in 2012 (World Bank 2014). It is natural that the graph has declined somewhat in the last few years, due to the Asian financial crisis and a generally slower Chinese economic growth.

Figure 3: Growth in Imports and Exports of Goods and Services as % of GDP. 1978-2012.

\[\text{Source: World Bank 2014.}\]

Increasing exports was one of the fundamental reasons why the SEZs were created. China initially focused on exporting simple goods, but has focused on upgrading its industrial

\(^7\) The growth rate is calculated differently by the Ministry of Foreign Relations and Trade and the General Customs Administration.
structure and export more advanced products as its economy has developed. Primary and manufactured goods represented 25.6 % and 74.4 % of total exports in 1990; in 2010 these represented 5.2 % and 94.8 % respectively. Imports of primary and manufactured goods represented 18.5 % and 81.5 % each in 1990, and in 2010 had shifted to 31.1 % and 68.9 % (China Statistical Yearbook 2011: 12, table 1-3).

These numbers illustrate that China has increased its amount of exported manufactured goods, and today such goods make up almost all of its exports. Similarly, the import of manufactured goods has declined, while imports of primary goods have risen. China is now exporting more advanced products, and importing less advanced products than in did before, pointing to an upgrade of its import and export structures.

Sun and Parikh (2001) find that export expansion generally has been beneficial to China’s economic growth. They also find positive spillover effects from the export to non-exporting sector. Unsurprisingly, they find that the positive impact of exports on GDP growth was significantly different from one region to another, with exports being more positive to GDP growth at the Eastern coast than in the central and Western parts of the country. Thus how much exports and FDI inflows can positively affect economic growth is highly dependent on the level of development, industrial structure, degree of openness, and policies of a region.
6 China´s SEZs: Why They Were Created, Their Positive Contributions, and Policies Towards Them

Chapter Outline
This chapter is the first of the two analytical chapters of this thesis. A set of thesis questions was outlined in chapter 1. This chapter seeks to answer the following questions:

- What were the government´s policies towards the SEZs?
- Why were the SEZs established and how did they contribute to China´s economic growth and the development of its economic system?

The chapter starts off with a presentation of China´s type of EPZ, the Special Economic Zones. Their historical background, how they were created, and some of their main developments are outlined. It goes on to analyze the government´s policies towards the SEZs, the reasons for establishing them, and how they contributed to the economic growth and the developments in China´s economic system. The case of the Shenzhen SEZ is explored in greater detail, before it is shortly discussed what China´s development could have looked like if the SEZs were never established.

6.1 EPZs in China: the Special Economic Zones
China´s type of export-processing zones, the SEZs, have been claimed to be the most comprehensive of the various export-processing zones as far as the scope of economic activities are concerned. The SEZs symbolized something entirely new and in many ways represented much of the pragmatism evident in Deng´s China, with a focus on achieving economic growth rater than socializing the economy (Ge 1999: 1268; Stoltenberg 1984: 637).

6.1.1 Historical Background and Development of the SEZs
When Deng came to power, China had experienced years of economic failures. The collectivization of agriculture, the ambitious attempt at industrializing China, the Great Leap
Forward, and the Cultural Revolution were all epic failures. The heavy-industry-oriented development strategy had increased the gap in the level of industrialization between China and other countries. Starvation had caused millions of deaths, the economy was almost destroyed, the living standard certainly wasn’t rising, and people questioned the government’s ability to lead. Deng realized that the market had to be allowed to play a part in the economy. At the same time, entirely opening up the closed, socialist economy of a massive country like China would have been difficult and potentially destabilizing. Reforming the economy more gradually and at a slower pace was more desirable, and in hindsight it was probably a better solution (Ge 1999; Lin et al. 2003; McKenney 1993).

The idea of setting up SEZs was discussed for the first time when Deng was briefed on a local problem in Guangdong: young men were fleeing Southern China trying to get to Hong Kong, and many died in the process. The initial response to the problem had been to set up fences and patrol the mainland border, but when Deng learned about the situation, he stated that the problem could not be solved with such measures. He said the reason for the escape attempts was the widening gap in living standards between China and Hong Kong, and in order to keep people from fleeing the mainland, China’s standard of living had to be improved. While visiting Guangdong, Deng also heard local officials complain about the lack of foreign currency, something that was needed in order to pay for foreign technology. Setting up two agricultural collection zones that could export fruits and vegetables to Hong Kong was discussed. In early 1979, shortly after Deng officially came to power, the process of getting Beijing to allow Guangdong to accept foreign investments begun. The idea was to create the foundation for the manufacturing of exports, initially in Guangdong, with Fujian province eventually following suit (Vogel 2013).

**The First Foreign Investment to China**

Only a few weeks later, the first foreign investment was approved. The investing company was a Hong Kong-based firm wanting to destroy old ships in order to use the scrap metal in construction projects. The experience with economic liberalization began in Shekou, located in southwestern Shenzhen (Vogel 2013: 397). It was actually this Hong Kong firm that originally launched the idea of developing Shekou into an industrial zone, and it requested special incentives from the central government. Shekou was an industrial zone comparable to the Asian EPZs, and while it was the first area allowing the presence of foreign capital and investors, it was not a SEZ as such (Yee 1992).
The two first economic zones were established in July 1979 in the provinces of Fujian and Guangdong. These provinces were allowed to experiment with more market-driven and outward-oriented economic systems while receiving government support. The first four official SEZs were set up the year after. These were Shenzhen, Shantou, Zhuhai, and Xiamen (Howell 1993; Vogel 2013; Yee 1992).

Figure 4: Map of the First Four SEZs in China.


6.1.2 Further Expanding the SEZs and Introducing New Types of Zones

The SEZs played a crucial role in China’s strategy of opening up its economy to the world. It has been argued that the Chinese SEZs were influenced by the success of similar zones in Taiwan and South Korea, as well as zones in other Asian countries (Falkenheim 1985: 145; Wei 2000: 199). Although both EPZs and SEZs are free trade zones, there are some differences between them. SEZs were generally more comprehensive in both size and scope, engaged in a wider range of activities. However, both types of zones performed many of the same roles, such as experimenting with newer and more advanced technology, creating
employment, and earning foreign exchange (Ota 2003). The East Asian EPZs were tools in an export-oriented industrialization strategy, after import-substitution industrialization was pursued, with a bigger focus on increasing exports. The Chinese SEZs to some extent pursued both of these objectives at the same time, and had a more general desire for the development of the economy and the economic system (Knoth 2000; Ota 2003).

Despite good economic growth in the first years of the SEZs, not everyone was happy with their performance. Some were not satisfied with their ability to attract foreign technology and earn foreign exchange. Most of Shenzhen’s FDI at the time came from Hong Kong, illustrating the cautious behavior of investors from the West and the more developed Asian countries. Economic crimes and inflation, massive infrastructural investments and fiscal deficits represented restraints on the success of the SEZs. However, the central leadership must have recognized the achievements and future potential of the zones, as the SEZ policy was further expanded with the opening of fourteen coastal cities with similar policies in 1984 (McKenney 1993; Ota 2003).

Some also complained about the big proportion of labor-intensive production going on the SEZs, instead of the high-tech manufacturing activities they were supposed to be creating. In order to emphasize the governments desire for technological upgrading in the new areas, new zones called “Economic and Technological Development Zones” were created. Other economic zones with similar purposes, but different names, were also established (Vogel 2013; Zeng 2010). With the increasing number of different economic zones in China, the initial SEZs gradually lost some of their unique status. After Deng’s “Southern tour” of 1992, he urged local governments to continue the reform process, something that increased FDI inflows even more. New sectors were opened up to foreign investments. This did not reduce differences between Chinese regions, which continued to worsen (Abraham, Konings, and Slootmaekers 2010; Ota 2003). The 9th FYP (1996-2000) sought to reduce regional differences, with measures such as the “Great Western Development Act” (Guangwen 2003: 64). Tax incentives previously given to foreign businesses in the SEZs were restricted, while the SEZ policy were expanded to interior regions. Despite a decline in the relative importance of the original four zones, FDI inflows to them reached an all-time high in 2007 (Naughton 2007; Ota 2003; Zeng 2011).
6.2 Government Policies Towards the SEZs

The pragmatic and flexible nature of the Chinese leadership during the initial economic reforms, and the willingness to break with the past and experiment with an entirely new economic system, enabled China to slowly implement capitalism after decades with a planned economy. While it might be difficult to point to an overall policy towards the SEZs, some elements making up a larger strategy can be distinguished. The pragmatism evident in the Deng-era in general stands out also when considering the policies towards the SEZs. The Open Door policy and the way the SEZs were created did not seem to have the ideological underpinnings it easily could have had, and the slogan “socialism with Chinese characteristics” showed that socialism in China was not untouchable (Lim 2014). It symbolizes how China welcomed capitalism while at the same time not departing too far away from its official ideology.

In my opinion, the most impressing aspect of the policy towards the SEZs was how the Chinese leadership managed to use the zones as tools to rapidly develop some parts of China and its economy, while at the same time maintaining control of the CCP (where internal intrigues has not been uncommon in the past) and retain its legitimacy towards the vast population it controlled. Additionally, the Deng administration managed to successfully do so while most of the time being in line with party ideology and tackling the various issues it faced over the years. Knoth (2000: 14) lists two challenges leaders of transition economies face: opposition from inside the political system, and opposition from people that are not happy with the outcome of reforms. China under Deng faced and tackled both these challenges when implementing the economic reforms.

Obviously, the CCP has done horrible things to maintain power, not only under Deng, but after his time as well. I am very aware of this. However, a debate around the rights and wrongs of the CCP is outside the scope of this thesis. Regardless of what the CCP has done in the past, from a political science perspective, the way it implemented its reforms while remaining in control of China is remarkable. Other non-democratic states have failed to achieve such accomplishments, despite having the same tools available.

Of the more specific policies towards the SEZs, the degree of autonomy given to them and their possibility of experimenting with different policies was crucial. Too much central
control could have stalled their development. The strategy of developing the coastal areas of China was the right one, as these areas had more experience with light manufacturing, were more advanced, had favorable locations close to more developed areas, and the possibility to produce and export goods in accordance with China’s natural endowment structure.

Developing a legal framework and simplifying bureaucratic procedures helped earn the trust of foreign investors, and the economic incentives given to them could also have been an element that attracted them to China. Using the potential of the huge Chinese market to bargain for foreign technology, and allowing joint ventures (JVs) to be set up, were smart ways to get access to more advanced technology from the outside. Gradually opening China up to capitalism and conducting economic experiments in some areas initially let the CCP stay in control while flirting with a totally different economic system. The reasons why the Chinese government established the SEZs and the main policies towards them are further outlined in the next section.

6.2.1 Creating a Legal Framework for the SEZs

The CCP initially issued a directive in July 1979, allowing Guangdong and Fujian to adopt special and flexible policies in order to develop foreign trade, tourism, and attract investments (Fenwick 1984: 397). The Regulations on Special Economic Zones in Guangdong Province (hereafter the Regulations), approved by the People’s Congress in August 1980, established the first legal framework regarding the SEZs (Xu 2011: 1115). The Xiamen SEZ in Fujian province was set up a few months after the zones in Guangdong.

Article 1 of the Regulations state:

“In order to develop economic co-operation and technical exchanges with foreign countries and to promote the socialist modernization programme, certain areas are to be delineated in the three cities of Shenzhen, Zhuhai and Shantou in Guangdong Province for the establishment of special economic zones” (Novexcn.com n.d.).

The way the SEZs were administrated was new to China, with its traditionally strong and centralized government. They were given much autonomy and freedom in how they operated, and administrative decentralization was encouraged for the first time. The SEZs were from the beginning set up as independent administrative units and governed by the province rather than the central government. Article 3 of the Regulations states:
“A Guangdong Province Committee for Administering Special Economic Zones shall be set up to exercise unified administration of the special zones on behalf of the People's Government of Guangdong Province” (Novexcn.com n.d.).

This article brought the SEZs under the direct control of local provincial committees, giving them a significant amount of power in the way they were administered and how they developed (Tantri 2013). Various regulatory bodies were created, for example the Guangdong Provincial Administrative Committee for the Special Economic Zones established by the provincial government. Its role was to coordinate and oversee development, and it was granted extensive administrative powers (Yee 1992: 66). Each SEZ was governed in a somewhat different manner, but administered by a committee of the Municipal People’s Government of the zone. Also Fujian set up an administrative committee for the regulation of its Xiamen SEZ. The SEZs were granted independent legislative rights, allowing them to reduce bureaucratic procedures and increase efficiency. The Chinese SEZs were administrated at a much lower level than EPZs found in other countries, which where normally controlled by the central government (Fan 1998; Gross 1988; Knoth 2000). Also the wide scope of functions allowed in the SEZs differed from the main purposes of the EPZs. Article 4 of the Regulations illustrates this:

“Investors may establish with their own investment, or in joint ventures with our side, all projects that have positive significance for international economic co-operation and technical exchanges, including those relating to industry, agriculture, animal husbandry, aquaculture, tourism, housing and construction, and research and manufacture involving advanced technology, as well as other businesses of common interest to investors and to our side” (Novexcn.com n.d.).

6.2.2 Beijing: Delegating Authority, but Always Maintaining Control

While the pragmatic leadership of Deng gave the SEZs a considerable amount of administrative autonomy, Beijing made sure they could control the zones. In order for the CCP to legitimize the establishment of the SEZs and the non-socialist values they represented, it was important that the policies towards them were based on an underlying socialist political authority and national sovereignty. The history of foreign enclaves in China
prior to 1949 is something linked to national humiliation, and that is why the Chinese government clearly stated the difference between the SEZs and earlier foreign-dominated enclaves. Thus, Beijing had more control over the SEZs than what it might seem like at first sight (Fenwick 1984; Gross 1988; Zheng 1987). For example did the central government retain ownership of SEZ land; this was covered in article 12 of the Regulations:

“Land in the special zones is owned by the People's Republic of China. The land to be used by investors will be provided according to actual needs; the duration of its use, the amount of the use fee and the method of payment will be given preferential consideration according to the different types of business and uses, and specific measures will be separately provided” (Novexcn.com n.d.).

The Regulations were quite vague on matters important to foreign investors, something that might have been intentional in order to give the Chinese government flexibility and maximum control over the zones (Fenwick 1984).

6.2.3 Improving Infrastructure and the Regulatory Framework

Despite article 5 giving the Guangdong Province Committee the responsibility for “undertaking land-leveling projects and building various public utilities in the special zones” (Novexcn.com n.d.), the underdeveloped infrastructure represented a problem in the initial stages of the SEZs, as did their uncertain regulatory framework and the low quality of their labor force. However, measures by the government were taken to improve the conditions in the zones. A regulatory framework was adopted to protect the interests of foreign investors, with laws regulating the activity in the SEZs later being written into national law after first being tried out in the zones. The Chinese government understood that in order to secure FDI inflows, which were one of the underlying reasons behind the establishment of the zones, special legislation guaranteeing the security and confidence of foreign investors in the zones was necessary. This is one of the reasons why the SEZs were given vast autonomy and why they developed a much more encompassing legal framework compared to that in China in general (Fenwick 1984; Stoltenberg 1984; Zheng 1987).

The Regulations included flexible labor laws meant to benefit foreign investors, something that was unique to the SEZs. Companies could recruit workers themselves rather than having
them assigned by the government, and firms could at least in theory dismiss workers. This possibility was unheard of in China, where the system of the “Iron rice bowl” guaranteed lifelong employment and benefits (Fenwick 1984: 391). Article 20 of the Regulations states:

“The staff and workers employed by enterprises in the special zones are to be managed by the enterprises according to their business requirements and, when necessary, may be dismissed, after going through the procedures provided in the labor contracts” (Novexcn.com n.d.).

However, despite what the Regulations laid out in theory, in practice it was harder to actually hire workers independent of SEZ authorities of firing employees. Promoting efficiency and productivity were difficult and the local labor force was unproductive, despite efforts at training and skill upgrading. While SEZ wages were lower than in nearby Hong Kong, they were still higher than anywhere else in China. These problems and the unhappy investors they caused called for solutions. The Provisional Labor and Wage Regulations of 1982 gave employers increased possibilities of sanctioning employees through warnings, wage reductions, and dismissals, and also facilitated higher efficiency and productivity through bonuses (Fenwick 1984).

6.3 Reasons for SEZs Establishment and Their Influence on China’s Economy

The Chinese leadership did not state clearly why they chose to establish the SEZs, but talked somewhat vaguely about the “Three Principles” of attracting foreign investments, promoting exports, and developing industry as reasons for creating the zones (Wu 1985: 134). The SEZs were supposed to assist China in accomplishing the “Four Modernizations”, and accomplish the goal of catching up with the capitalist world by 2049, the 100th anniversary of communism in China (Gross 1988: 24; Oborne 1986).

Many of the reasons behind the establishment of EPZs in other countries were also evident in China. In the past two decades before China established its SEZs, the results of EPZs in a number of other countries had been studied. The Chinese state wanted to attract FDI, conduct controlled, economic experiences in geographically limited areas, import more advanced technologies, knowledge and managerial skills, promote manufactured exports according to its comparative advantages, upgrade its industrial structure, increase employment, and create
spillover effects to nearby areas and the country as a whole (Ge 1999; Pissula and Lösch 1990; Vogel 2013; Wong and Chu 1984).

The first four SEZs were located at the coast for several reasons. It was a deliberate strategy to develop the coastal areas, and the SEZs could kick start that strategy. The zones could benefit from their location close to the more developed areas of Hong Kong, Macao and Taiwan, which could provide capital and better technology. They could also take advantage of the many potential overseas Chinese investors in these areas (Park 1997). The SEZs gave China the opportunity to show that they were capable of developing capitalist areas inside mainland China, demonstrating to Hong Kong, Macao and Taiwan that the strategy of “one country, two systems” had something to it (Leng 2009). Hong Kong was to be given back to China from Great Britain in 1997, and although Macao and Taiwan didn’t have a set date for reintegration with the mainland, they were probably on the minds of the Chinese policy makers as well.

Generally speaking, the SEZs have been a success. They contributed to the rebuilding of an economy left in shambles by Mao, and played a part in transforming the economic system and introducing capitalism to China. The Chinese SEZs were important both to China’s economic growth and because they played a role as capitalist laboratories. Table 3 illustrates the GDP development of the zones.

Table 3: Real GDP in the First Four SEZs in RMB Billion. Various Years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Shenzhen</th>
<th>Zhuhai</th>
<th>Shantou</th>
<th>Xiamen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.48</td>
</tr>
<tr>
<td>1979</td>
<td>0.196</td>
<td>0.209</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1980</td>
<td>-</td>
<td>-</td>
<td>1.097</td>
<td>-</td>
</tr>
<tr>
<td>1990</td>
<td>17.167</td>
<td>4.143</td>
<td>7.245</td>
<td>5.709</td>
</tr>
<tr>
<td>2000</td>
<td>218.745</td>
<td>33.143</td>
<td>45.016</td>
<td>50.187</td>
</tr>
<tr>
<td>2006</td>
<td>581.356</td>
<td>74.770</td>
<td>73.738</td>
<td>116.082</td>
</tr>
</tbody>
</table>

The GDP of the four initial SEZs grew much after their establishment. Around the time the SEZs were created, their GDP was negligible and only in Shantou did it hover around the RMB one billion mark. Some 26 years after their creation, the GDP of two zones were on the way to reaching RMB 100 billion, one had already grown past that figure, while that of Shenzhen had even surpassed RMB 500 billion. The success of the Chinese SEZs stands in contrast to the performance of the Asian EPZs, which had more mixed results (Amirahmadi and Wu 1995). In 2006, just the four initial zones plus the Hainan SEZ accounted for 5 % of China’s total real GDP (Zeng 2011: 13).

6.3.1 The SEZs Allowed China to Conduct Economic Experiments in Controlled “Laboratories” While Gradually Opening up the Economy

While the SEZs affected many areas of China’s economy and economic system, perhaps their most substantial role was that of being laboratories for a new economic system. The early SEZs slightly opened the door to the world economy. At the same time, the Chinese state remained in control because it limited the economic experiments to certain small and backward geographical areas, ensuring that the capitalist ideology would not spread too fast or uncontrollably into the country as a whole. In addition, China spans an enormous geographical area where some parts are more developed than others. Implementing new economic reforms all over the country at the same time would not have been ideal, as the degree of success likely would have varied from one area to another based on the level of development. China simply didn’t have the resources to pursue the development of many regions simultaneously (Zheng 1987).

With the creation of SEZs, China could assure its sovereignty, control foreign investments, and not have to obey a system of unequal treaties. Because foreign powers have controlled parts of China in the past, it was crucial that the SEZ experiment was not perceived as a repetition of history. If the initial controlled economic experiments proved successful, the Chinese leadership could implement the desired elements of the new economic policy to other areas of the country (Amirahmadi and Wu 1995; Ge 1999; Pissula and Lösch 1990; Stoltenberg 1984). The average Chinese wanted an improvement in the standard of living, and economic reforms had to be implemented in order to achieve that goal. Deng probably understood that uncontrolled reforms and the possibility of instability could seriously undermine the party. I believe many people in democratic societies overestimate the desire
for democracy in China, and underestimate the need for stability. While the pressure for
democratic reforms have become more important with China’s improved economy, and will
continue to grow in the future, stability, order and economic growth were arguably more
important than democracy to most Chinese in the late 1970s. Implementing capitalist policies
in a controlled manner enabled China to achieve economic growth and open up to the world
while at the same time ensuring political and economic stability.

A number of economic experiments were carried out in the SEZs, especially in the area of
foreign trade. After decades with a closed economic system, foreign capital and firms were
allowed into China, as well as their production techniques, technology, and management
strategies. Other policies first tried out in the SEZs were reforms of the inefficient SOEs, the
development of markets for stocks and bonds, an improved legal structure, bureaucratic
reforms increasing efficiency and simplifying regulations and rules, and a more market-
friendly economic environment (Ge 1999).

6.3.2 The SEZs as “Windows” to the World and Tools for Increasing

Exports

The SEZs acted as “windows” to the outside. The limited geographical extension of the initial
SEZs made it easier for China to keep tabs on what the foreign companies did in terms of
technological upgrading, innovation, and strategies for improving distribution, management,
and efficiency. As well as giving Chinese officials the opportunity to look outside, foreign
investors could also look in and learn more about the business policies in the zones and how
the Chinese market functioned (Zheng 1987).

China wished to increase exports when the economic reforms were implemented, as stated in
the Trial Measures Concerning the Promotion of Exports by Importation of 1979: “In order
to carry out the general task of the new period and to shift the focus of the work on to the
track of socialist modernization, foreign trade should be greatly expanded and developed.
Exports must be greatly increased for the purpose of introducing new technology and
importing equipment in complete sets” (The Asian Legal Information Institute n.d.A).

Under the Open Door policy, the goal of increasing exports was to be achieved through the
development of China’s coastal areas, transforming and upgrading their industrial structure
and rapidly increasing their ability to export. Also the *Regulations* expressed the desire for increased export activity. Article 9 reads:

“A joint venture is encouraged to market its products outside China. Export products may be distributed to foreign markets through the joint venture directly or through associated agencies, and they may also be distributed through China's foreign trade agencies” (Novexcn.com n.d.).

The revenue from exports could be used to finance the imports China needed in its industry and export sector, and allow it to import more advanced foreign technology. Imports and exports were dependent on each other. Like the incentives given to foreign investors in order to attract FDI, various preferential policies were established to increase the productivity of exporting businesses, such as duty-free imports, exemption from commercial taxes, and allowing them to retain higher parts of their foreign exchange earnings (Yee 1992). The development of the coastal areas was part of the overall strategy of strengthening the Chinese economy, and this goal has been achieved with the assistance of the SEZs. Xiamen and Shenzhen has been transformed from small, backwards areas to major economic centers, and large parts of coastal China is far more developed than other regions today. Table 4 briefly illustrates the export performance of the SEZs. It shows how SEZ exports rose rapidly after the beginning of the economic reforms. Their share of total Chinese exports have been very high, above 70 % after 1985 and even surpassing 90 % in 2005.

Table 4: Export Performance of China and Chinese SEZs, USD Million. 1980-2005.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Chinese Exports (USD Million)</th>
<th>SEZ Exports (USD Million)</th>
<th>SEZ Share of Total Exports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>18.119</td>
<td>278 (4)</td>
<td>1.5</td>
</tr>
<tr>
<td>1985</td>
<td>27.350</td>
<td>24.327 (77)</td>
<td>89.0</td>
</tr>
<tr>
<td>1990</td>
<td>62.091</td>
<td>44.602 (290)</td>
<td>71.8</td>
</tr>
<tr>
<td>1995</td>
<td>148.780</td>
<td>124.692 (341)</td>
<td>83.8</td>
</tr>
<tr>
<td>2000</td>
<td>249.203</td>
<td>228.779 (341)</td>
<td>91.8</td>
</tr>
<tr>
<td>2005</td>
<td>761.953</td>
<td>709.373 (342)</td>
<td>93.1</td>
</tr>
</tbody>
</table>

*Source: Xu 2011: 1114. Numbers compiled from various official Chinese statistical yearbooks.*

*Note:* number of SEZs at the time in parenthesis.
6.3.3 The SEZs as Attractors of FDI Through Policies and Incentives

The technological gap created by Mao’s self-reliance policy meant that China had to welcome foreign technology and FDI, and policies were developed in order to attract these elements. Because what has been argued as being the most effective way to attract FDI, a fully open and free market, was not an option for China, the SEZs were to play the role of FDI-attracting hubs (Amirahmadi and Wu 1995; Fan 1998; Luo 2001; Pissula and Lösch 1990).

In order to create FDI inflows, incentives were given to foreign investors. FDI can be beneficial through creating positive spillover effects, facilitate the implementation of more advanced technology and better management, increase human capital and tax revenue, provide competition that improves the capability and strategy of local firms, and pressure local policy makers to develop the domestic business environment (Knoth 2000). At the time of the establishment of the SEZs, China had limited public revenue, a shortage of foreign currency and fiscal deficits. Creating the SEZs was a good way for the state to attract desired foreign capital and currency and at the same time not having to use too much of its own capital resources. In return for investing, investors got access to cheap labor as well as experiences with and opportunities in the emerging and potentially highly profitable Chinese market (Martellaro and Sun 1987; Profaizer 1993).

JVs and FDI were first allowed in 1979 when the National People’s Congress adopted the Law of The People’s Republic of China on Joint Venture Using Chinese and Foreign Investment (The Asian Legal Information Institute n.d. B). Article 1 states:

“With a view to expanding international economic co-operation and technical exchange, the People’s Republic of China permits foreign companies, enterprises, other economic organizations or individuals […] to joint with Chinese companies, enterprises or other economic organizations […] in establishing joint ventures in the People's Republic of China”.

The Law on Joint Ventures required a minimum 25 % foreign equity share. Illustrating the different legal and policy environments of the SEZs, the Regulations governing the zones did
not require this. The SEZ administrators could approve foreign investments and regulate industrial activity in the zones, and JVs did not need authorization from the Foreign Investment Commission (Fenwick 1984: 382-383).

The Chinese government invited FDI to partake in its economy to a bigger extent than what was the case in most other countries using economic zones as an instrument to attract foreign capital. While foreign investments usually flowed mainly to labor-intensive industries in other economic zones, article 4 of the Regulations invited FDI to a host of different sectors in the SEZs. Besides the great desire for foreign investments in itself, one of the reasons for encouraging FDI to many different sectors of the economy was because it was needed in the development and maintenance of the SEZs. Local governments were unsure about the assistance they would receive from the central leadership, and foreign investments were thus important in financing the zones (Fenwick 1984).

Establishing the first SEZs in proximity to more developed areas was done in order to make them attractive places to invest. Shenzhen is located only a short distance from Hong Kong, Zhuhai is close to Macao, Xiamen lies across the strait of Taiwan, and Shantou reap the benefits of being the home to a large population of overseas Chinese. This proximity made it easier for investors to control their projects in the SEZs. The scarcity of land and labor in a place like Hong Kong made the SEZs attractive places to relocate labor-intensive industries, with their low price on real estate and labor (Ota 2003; Pissula and Lösch 1990; Wu 1985; Zheng 1987).

Special Incentives Given to Foreign Investors
The economic incentives usually seen in EPZs, given in order to attract investments, were also present in the Chinese SEZs. The public sector took responsibility for improving such elements as the infrastructure, legal framework, and bureaucratic procedures in the SEZs (Ge 1999). Components needed for industrial activities in the SEZs were to be duty free, as outlined in article 13 of the Regulations:

“Machinery and equipment, spare parts, raw and semi-processed materials, means of transportation and other capital goods required for production imported by enterprises in the special zones shall be exempted from import duties” (Novexcn.com n.d.).
This translated into a better, more efficient business environment with lower costs of production and a greater potential for profits for the foreign investor. Of course, the large and low-paid labor force in China was also beneficial to foreign companies. Enterprises in Guangdong and Fujian were taxed less than companies elsewhere in China, and sometimes they received tax exemptions or tax holidays for a period of time. For example were corporations in the SEZs taxed only 15% of their profits, as outlined in article 14 of the Regulations, compared to the 33% profit tax levied on JVs outside the zones. Foreign enterprises that were not JVs were taxed 30-50%. Hong Kong’s corporate profit tax was 17% (Fenwick 1984: 383). The individual SEZ established its own tax rules in addition to the tax policy incorporated uniformly in the zones (Zheng 1987). In order to stimulate foreign investors to keep their money in the China, article 16 gave investors reinvesting in the zones for more than five years the possibility of applying for a tax exemption on profits made from such reinvestments (Novexcn.com n.d.). On the first day of 2008, foreign companies in China did no longer receive special tax benefits. A 25% single corporate tax was approved. However, firms in high-tech and other highly prioritized industries did still continue to benefit from a five-year transition phase (Abraham et al. 2010: 144; Gross 1988).

Local suppliers inside the zones were not protected in the same manner as those outside, but firms using locally produced components were given discounts and favorable terms of payments:

“Enterprises in the special zones are encouraged to use machinery and equipment, raw and semi-processed materials and other goods and materials produced in our country, and preferential prices will be offered on the basis of our country's current export prices for the same kinds of commodities, using foreign exchange to settle accounts” (Novexcn.com n.d., article 17).

Exported products manufactured in the zones were also exempt from duties, but in Shenzhen, for example, materials imported from the inland and simply processed in the SEZs were not included. After initially requiring foreign investors to have Chinese partners, policies allowing the establishment of wholly owned foreign enterprises were implemented from 1986. Rents on land lease were low, and foreign investors were allowed to lease land for an extended period of time, and labor regulations were less strict in the SEZs than in the rest of the country. In general, the bureaucratic and administrative system was simplified and it was
given financial incentives to foreign investors, making it both less complicated and more profitable to invest in China (Gross 1988; Varum et al. 2007; Wall 1993; Zheng 1987).

Despite all the positive incentives offered to foreign investors, it can be argued that these were not very important, and that FDI would have flowed to China anyway. Huang and Shirai (1994) find that many developing countries experienced low initial inflows of FDI despite government policies actively seeking to attract foreign investments. Due to an uncertain investment environment in developing countries, foreign investors act cautiously and government incentives might not be enough to attract FDI. McKinsey Global Institute (2003) does not find evidence that such incentives are useful tools for creating economic value. Rather, it is argued that governments instead should strengthen the competitive environment, enforce law and regulations evenly, and develop a strong physical and legal infrastructure. China’s cheap and abundant labor, coupled with its potentially enormous and profitable market, could have been sufficient enough in itself to attract FDI. Table 5 summarizes some of the incentives given to foreign investors in the Law on JVs and in the Regulations, and how they benefited both the foreign investor and China.
Table 5: Important Incentives in the *Law on Joint Ventures* and in the *Regulations*, and How They Benefited Both Foreign Investors and China

<table>
<thead>
<tr>
<th>Year</th>
<th>Law</th>
<th>Article</th>
<th>Content</th>
<th>Benefits to Foreign Investors</th>
<th>Benefits for China</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>Law on JVs</td>
<td>2</td>
<td>Protect profits and investments</td>
<td>Protection of investments</td>
<td>Increase FDI due to confident investors</td>
</tr>
<tr>
<td>1979</td>
<td>Law on JVs</td>
<td>7</td>
<td>Reduction/exemption of income tax for high-tech firms, first 2-3 profitable years</td>
<td>Less tax, higher profits</td>
<td>Exposure to high technology</td>
</tr>
<tr>
<td>1979 and 1980</td>
<td>Law on JVs and Regulations on SEZs</td>
<td>7 and 16</td>
<td>Tax refund if net profits are reinvested</td>
<td>Profitable to reinvest</td>
<td>Keeping FDI in China</td>
</tr>
<tr>
<td>1979 and 1980</td>
<td>Law on JVs and Regulations on SEZs</td>
<td>10 and 15</td>
<td>Allow profits to be remitted abroad through Bank of China</td>
<td>Possibility of taking profits out of China</td>
<td>Increased activity for Bank of China</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>4</td>
<td>Allow FDI to a number of sectors</td>
<td>Possibilities in many sectors</td>
<td>Maximize total FDI inflows</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>5</td>
<td>Take responsibility for various infrastructural developments</td>
<td>Necessary infrastructure is provided</td>
<td>Make it attractive to invest, improve infrastructure</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>12</td>
<td>Provide land at preferential rates</td>
<td>Access to land at preferential rates</td>
<td>Make it attractive to invest, maintain control over Chinese land</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>13</td>
<td>Duty-free import of necessary components</td>
<td>Save money on necessary imports</td>
<td>Increase total FDI</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>14</td>
<td>Tax rate 15%, extra incentives to early/high-tech/high-investing firms</td>
<td>Save money due to less tax</td>
<td>Increase total FDI, induce higher investments, exposure to high technology</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>17</td>
<td>Preferential rates on locally produced components</td>
<td>Save money on cheaper components</td>
<td>Greater activity for local producers</td>
</tr>
<tr>
<td>1980</td>
<td>Regulations on SEZs</td>
<td>19</td>
<td>Allow firms to test labor before employment</td>
<td>Quality control of labor</td>
<td>Make it attractive to invest and operate in China</td>
</tr>
</tbody>
</table>

The SEZs Were Successful in Attracting FDI

The initial SEZs were quite successful in attracting FDI, and accounted for a big share of total FDI to China. They managed to attract bigger inflows of FDI than other Asian EPZs (Amirahmadi and Wu 1995). In 1981, FDI to the four initial SEZs represented almost 60% of total FDI to China. Shenzhen alone attracted more than 50% of this (Yeung et al. 2009: 224). In 1984, this number had decreased to 26%, still a high number (Alder et al. 2012: 11). In 2005, China became the biggest FDI recipient among all the countries in the world (Xu 2011: 1113). Table 6 illustrates FDI inflow to each of the four initial SEZs.

Table 6: FDI to the Initial Four SEZs, 2009 USD Million. Various Years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Shenzhen</th>
<th>Zhuhai</th>
<th>Shantou</th>
<th>Xiamen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>5.48</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1980</td>
<td>-</td>
<td>-</td>
<td>1.61</td>
<td>-</td>
</tr>
<tr>
<td>1990</td>
<td>389.94</td>
<td>69.1</td>
<td>98.09</td>
<td>72.37</td>
</tr>
<tr>
<td>2000</td>
<td>1,961.45</td>
<td>815.18</td>
<td>165.61</td>
<td>1,031.50</td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td>954.61</td>
</tr>
<tr>
<td>2007</td>
<td>3,662.17</td>
<td>1,028.83</td>
<td>171.62</td>
<td>-</td>
</tr>
</tbody>
</table>


While the FDI flows to the SEZs have been impressive, it has been an issue that the majority of FDI went to the coastal areas of China. Guangdong province alone received around 60% of China’s total FDI in the first ten years after the reforms (Ota 2003: 9). This is something that has contributed to the big differences between Chinese provinces, an issue the government has tried to address through such strategies as the Western Development Strategy.

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8 For a more thorough description of the Western Development Strategy, see Lai 2002.
Sources of FDI
From the creation of the SEZs, the intention was to attract FDI from Hong Kong and Macao, as well as from the Chinese diaspora in other countries. Between 1979-2003, a large majority of 72.7% of FDI to China came from Hong Kong. However, it is likely that a proportion of this came from Taiwan, funneled through Hong Kong for political reasons, and from the mainland recycled through Hong Kong in order to profit from the government’s incentives to foreign investors. Taiwan accounted for 9.3% of total FDI, while Macao represented 2.9%, and Singapore with its large Chinese population 2.3% over the period (Fan 1998: 24; Wei 1993: 7). Other than reasons such as proximity to the mainland, its cheap labor, and the preferential policies towards foreign investors, another possible reason why Hong Kong represented a substantial share of FDI could have been because the Regulations was created with Hong Kong in mind (Fenwick 1984).

6.3.4 The SEZs as Tools to Create Spillover Effects
The presence of foreign corporations and FDI has been sought after by the governments of many developing countries, due to its potential for creating spillover effects such as implementation of advanced technology, know-how, and managing practices. Spillovers can benefit not only the domestic partner of a joint venture, but also other producers in the same region or sector through an increased demand for components (Abraham et al. 2010; Moura and Forte 2010). Domestic labor might benefit from the presence of foreign firms, as these tend to pay higher wages than local employers (Lipsey and Sjöholm 2002).

Incentives were given to foreign investors that could expose China to advanced technology. One such policy was laid out in article 7 of the Law on Joint Ventures:

“A joint venture that possesses advanced technology by world standards may apply for a reduction of or exemption from income tax for the first two to three profit-making years” (The Asian Legal Information Institute n.d.B).

Such policies could expose China to advanced technology it did not have the capacity to develop itself. However, much of the activities of foreign firms in the SEZs were of a simple nature, and foreign firms can be reluctant to give away their comparative advantage of possessing better technology. It is difficult to assess the potential positive spillover effects
created by FDI and the presence of foreign corporations. One way to identify positive spillovers is to consider the growth in the number of companies operating in high-tech industries in the SEZs, but such a statistic does not isolate the effects of FDI. A detailed description of the positive effects FDI and foreign companies have had on the technological and industrial structures of China is outside the scope of this thesis. However, through an analysis of the available literature it is attempted to broadly illustrate how foreign firms and investments have benefited China’s economy, industry and technology.

Wang (2009) argues that the creation of the SEZs has contributed to more advanced technology coming to China, and that the SEZ policies increased FDI by 58%. Liu’s (2008) analysis of a large sample of Chinese firms finds that the overall contribution by FDI has been positive, because it created technology transfers. Abraham et al. (2010) claim that Chinese firms partnering with a foreign firm are more productive, and that domestic firms in the manufacturing industry can benefit from the presence of foreign firms. Liu’s (2002) findings, based on data from manufacturing industries in the Shenzhen SEZ between 1993-1998, show that FDI might have had positive spillover effects through creating higher productivity growth rates in manufacturing industries. OECD (2000) finds that FDI has created jobs in China, upgraded skills because FDI firms use a bigger share of its workers in the production process, increased productivity levels and transferred technology, upgraded the industrial structure, and increased competition and industrial performance. Long (2005) reviews a number of studies and finds that FDI caused an increase in technological capabilities. Better technology from foreign firms has contributed to filling technological gaps, and increased competition has upgraded China’s technological level. Favorable policies towards R&D have caused foreign firms to conduct such activities in China, and exposed it to more advanced technology. The use of local producers by foreign enterprises, and the quality requirements towards them, has also created positive spillovers to domestic manufacturers.

High-tech spillovers to China might have been limited, because FDI to high-tech industries has been scarce, at least up until the mid-1990s. On of the reasons for this has been that the majority of FDI to China came from less developed areas such as Hong Kong and Taiwan, and been invested in low- or medium-tech industries. The technological spillovers gained were nonetheless positive as they represented better technology than China had at the time, despite that it was less advanced than in the Western world. In addition, China gained
experienced in the light consumer industries that Hong Kong and Taiwan had developed several years earlier (Chen, Chang, and Zhang 1995).

While most of the FDI to China has come from countries that are not among the most technologically advanced, there are still high-tech producers in these areas, and one cannot exclude the possibility of high-tech spillovers. Additionally, China did receive FDI from more developed countries as well. The sources of FDI to China have been shifting since 1993, which might have had a positive effect on the transfer of more advanced technology (OECD 2000). One should not overlook spillover effects not related to economic growth or technological development, such as the demonstration effects foreign companies have had on Chinese firms. It exposed domestic producers to international competition and forced them to pay attention to such things as product quality, production costs and management strategies (Chen et al. 1995).

**Spillovers and FDI are Not Always Positive**

Although FDI can positively influence a developing country in a number of ways, it does not have to be entirely beneficial to the recipient country. Some of the anticipated positive spillovers from FDI might turn out to be more nuanced when analyzed further. Nourrioff (1988: 209, as referenced in Knoth 2000: 93) list some negative aspects associated with the flow of FDI to China:

1) The technology China received was outdated and backwards, and not high-tech.
2) The value of that technology was not as great as it was estimated.
3) Some imported components were locally available at a better price, and some imports were actually exported from China first.
4) Foreigners exploited Chinese negotiators.
5) China was underestimating the value of its contributions to the JVs.

The findings by Hale and Long (2011) contradict Liu’s argument that FDI creates productivity spillovers to China, claiming that many such estimates are exaggerated. Abraham et al. (2010) argue that only those economic zones with the specific aim of developing China’s own high-tech industries were positively influencing the domestic market, thus casting doubt on the positive spillovers effects from foreign firms in the SEZs.
6.3.5 The SEZs as Tools for Reintegrating Overseas Areas

Locating the SEZs next to Hong Kong, Macao, and the politically delicate island of Taiwan, was done partly in order to take advantage of the more developed industries and economies in these areas. However, this was not the only reason. Reintegrating Taiwan and Hong Kong as parts of China has been high on the Chinese foreign policy agenda for a long time. Knowing that the 100-year lease of Hong Kong to Great Britain was due to expire in 1997, it was important for the CCP to show their ability to create prosperity and stability in the SEZs. As Hong Kong had a developed capitalist economy, the market-oriented economies of the SEZs could help calm Hong Kong’s fears of being reunited with China. Hence, one reason for directing greater efforts at developing the Shenzhen SEZ compared to the other three initial zones was its convenient location right next to Hong Kong (Fenwick 1984; Gross 1988; Park 1997; Zheng 1987).

Macao’s reunification with the mainland was not decided before 1987 (Filseth and Næverdal 2013), and Taiwan still hasn’t been reunited with China. As such it is hard to know if the reunification of these areas was considered directly when the zones were created. However, their future was probably something the Chinese leadership had in mind when deciding the locations of the SEZs.

6.4 The Case of the Shenzhen Special Economic Zone

In order to illustrate in greater detail how the SEZs contributed to the Chinese economic growth and the development of China’s economic system, I will briefly consider the case of the Shenzhen SEZ. Of the four initial SEZs, Shenzhen has been the zone developing most rapidly and achieving the highest rates of economic growth. It occupied the biggest geographical area, had the most established legal framework early on, and was in many ways the frontrunner of the initial SEZs. It had the greatest freedom to innovate, and policies later adopted in other zones were often first tried out in Shenzhen (Yeung et. al 2009; Zheng 1987). As it performed better than the other initial SEZs, in one respect it can be argued that Shenzhen is not representative of China’s SEZs. At the same time, Shenzhen was not the only SEZ that grew faster than China overall. Much of the positive impact Shenzhen had on the Chinese economy has also been evident in other zones. Thus it can be argued that the case of the Shenzhen SEZ in fact can shed light on other SEZs as well.
6.4.1 Developments in the Shenzhen SEZ

Earlier in this chapter, I have gone over the main developments of the Chinese SEZs, their establishment, and the policies towards them. Much of that analysis also applies to the Shenzhen SEZ. While the SEZs were generally established for the same reasons, they were not uniform in all aspects. A disadvantage of Shenzhen was its scarce population and its lack of an industrial base, but at the same time it was the biggest of the initial four zones and enjoyed a huge advantage in being located next to the more developed city of Hong Kong. The relative decentralized administrative policies towards the SEZs were also evident in Shenzhen. In 1981 it was granted the same status as the provincial capital of Guangzhou, and in 1988 it received provincial status concerning matters of economic planning (Yeung et al. 2009: 229).

Experimenting With New Policies

Shenzhen experimented with many different policies before the rest of China and the other SEZs. This might have been one important factor leading to the better economic performance of this particular zone. Some of Shenzhen’s earliest reforms happened in the land market, and it was the first to commercialize residential land. Its price system was reformed in 1980, and the banking system was liberalized. It allowed the establishment of the first foreign bank in China in 1982 (Yuan, Guo, Xu, Li, Luo, Lin, and Yuan 2010: 64-65). It experimented with wage reform much earlier than the rest of China, and adjusted the labor-contract system in line with a changing economic system. These important initial reforms introduced the market forces to the planned economy and laid out the course of future reforms (Yeung et al. 2009; Yuan et al. 2010).

Eventually, more comprehensive reforms were introduced. State-owned land was made available for private use, and the price and management reforms were further extended. Entrepreneurship in high-tech industries was encouraged, and in 1986 the local government carried out early reforms of the SOEs, turning them into joint-stock companies. It established China’s first stock exchange in 1990. From 1992, the focus was on institutional reforms. The tradition of government job allocation was altered, a minimum wage and other worker and social protections were established, and the management of public utilities was strengthened. In 1997, the reforms were further deepened with the sale of industrial land, the establishment of a high-tech market, and reforms in the way the government allocated resources (Yuan et
Shenzhen was perhaps the SEZ that to the biggest extent acted as a capitalist laboratory, as many of the successful policies and laws of the zone were later implemented on a nation-wide scale.

6.4.2 GDP Growth
Shenzhen’s GDP grew at 54 % in the period 1980-1984, right after it was set up (Alder et al. 2012: 11). The zone managed to maintain a very high growth rate also in the next decades; its GDP grew on average 25.3 % annually, while its GDP per capita grew at an annual rate of 11.8 % on average between 1979-2010 (Shenzhen Statistical Yearbook 2011: 5, table 1-3). In the same period, China’s GDP grew at 10 % on average per year (World Bank 2014). While the other initial zones grew less than Shenzhen, it was not the only SEZ growing faster than the national economy. Shenzhen and the other SEZs achieved the goal of acting as locomotives for economic growth.

Figure 5: Growth in Shenzhen’s GDP, RMB 10,000. 1979-2010.


6.4.3 Exports and Imports
Between 1979-1994, Shenzhen’s exports increased 1969 times, growing at a yearly rate of 75 % (Ge 1999: 1278). In 1979, its total exports amounted to USD 9.3 million, while imports stood at USD 7.46 million. Hence, the total foreign trade was quite limited. In 2010, these
numbers had risen to USD 204.18 trillion for exports and USD 142.57 trillion for imports, an almost unbelievable growth. The average annual growth from 1979-2010 was 33.6 % for exports and 32.6 % for imports (Shenzhen Statistical Yearbook 2011: 7, table 1-3). Its share of total Chinese exports was 0 % in 1979, and 14 % in 2007. That year was the 15th consecutive year it was the number one exporting city in China (Knoth 2000: 106, Yeung et al. 2009: 231). Shenzhen has been a very important tool for increasing China´s exports and foreign trade.

6.4.4 Employment
While employment has increased in all the SEZs, it has grown remarkably in Shenzhen. The zone employed only 139,500 people in 1979, but in 2010 this figure had increased to over 7 million. Total employed persons grew on average 13.5 % annually in this period (Shenzhen Statistical Yearbook 2011: 4, table 1-3). Thus also the goal of creating employment has been something the Shenzhen SEZ has achieved (Tantri 2013). With much unemployment and poverty, and many people employed in low-paid jobs and in the agricultural sector, China needed the jobs created by the SEZs.

6.4.5 FDI
Shenzhen´s inflow of actually used FDI rose rapidly between 1979 and 2010, from USD 10 million to USD 4.3 billion (Shenzhen Statistical Yearbook 2011: 293, table 13-4). The growth in FDI to Shenzhen has been impressive, but its share of total FDI to China has declined over the same period, from 4.5 % to 3.7 %, despite reaching levels between 10 % and 15 % in the 1980s (Knoth 2000: 108). The Shenzhen SEZ has been successful in attracting FDI, one of the objectives it was hoped it would fulfill. After the initial SEZs were established, various economic zones have been set up, and the Chinese economy has generally been liberalized. A natural consequence of these developments was that Shenzhen´s share of total FDI to China decreased.

Similar to the pattern of FDI inflows to China and the SEZs in general, also for Shenzhen was Hong Kong the dominant source of foreign investments. Examining the sources of foreign investments to Shenzhen in the period 1979-1995, USD 6.14 million came from Hong Kong, and it is estimated that it represented around 90 % of Shenzhen´s FDI in its first five years (Ota 2003: 18-19; Wong 1987, as referenced in Ota 2003: 19). Locating Shenzhen
in proximity to this area contributed to making it an important source of FDI, something that was the goal of an intended strategy. Cheap labor and preferential FDI policies also made Shenzhen an attractive place to invest. However, while all the SEZs had preferential policies, Shenzhen adopted additional measures not found in the other zones (Wei 2000; Yeung et al. 2009).

6.4.6 Why Has Shenzhen Been the Most Successful Initial SEZ?

As presented in table 3, by 2006 the GDP of the Shenzhen SEZ was much higher than the other three initial zones. It has developed the most and has the strongest economy of the four initial SEZs. Some reasons why Shenzhen performed better than the other zones can be pointed to. Perhaps the most obvious reason is its location close to Hong Kong. As this has been the biggest source of FDI to China, being located close to it has naturally been an advantage. The contribution of FDI to total fixed assets investments has generally been higher in Shenzhen than in other areas of China, and it has been the number one exporting city in the country for a number of years. Shenzhen had more freedom to innovate and experiment with new policies than the other zones. It was not only the first SEZ, but also the first city in China to implement a number of important policies. The numerous early policy experiments laid the foundation for the development of Shenzhen’s market and institutional framework. Shenzhen’s local government also seemingly performed better than the governments of other zones. Not only did it implement successful policies early on, but it also shifted its focus to more technology-intensive industries when the costs of land and labor rose. It avoided elements of bad governance evident in other SEZs. For example, Zhuhai’s infrastructure was overbuilt, and the construction of its excessive airport used up too much of its capital resources. Shantou experienced scandals related to such negative elements as corruption and smuggling (Zeng 2011). Additionally, Shenzhen successfully managed to upgrade its industrial structure and enhance its technological capabilities, and high-tech rather than labor-intensive industries bear its economy today. Its technological capacity is one of the highest in China, and it is also the leading exporting city in the country (Wei 2000; Yeung et al. 2009). This is discussed further in the next chapter.

6.5 China’s Development Without the SEZs

In the past sections, it has been illustrated how the SEZs have contributed to the growth of the Chinese economy and the development of its economic system. As a follow-up to this, it
is natural to question if China would have developed in the same manner had the SEZs not been established. In order to understand the roles of the SEZs in China’s development, one has to consider the outcome without them as well.

The SEZs contributed to the development of the coastal areas at the expense of inland regions, something that has created big differences between respective parts of China. However, the coastal parts of China might have developed faster than other regions even without the SEZs. They had a comparative advantage in their location, production capabilities, and level of development, and it is probable that foreign investors would have established themselves at the coast even without the creation of the SEZs.

As Wall (1993) and Huang and Shirai (1994) point to, the economic incentives in the zones might not have been that important in attracting FDI. It is natural to believe that China’s vast amount of cheap labor and enormous domestic market would have caused big FDI inflows anyway, both to China in general and especially to the coastal areas. While the SEZs probably contributed to the rapid development of the Chinese economy, they were not the only reason behind the economic growth. The ideas of Deng and the Chinese leadership after Mao were of such a nature that the economy probably would have been reformed and opened up in one way or another, with or without the SEZs. While FDI flows to the SEZs represented a major share of total FDI to China, they were not the only areas capable of attracting FDI. FDI to the zones accounted for between 29-25 % of total FDI flows to China in the years from 1984-1990 (Knoth 2000: 96). FDI did also flow to non-SEZs in the early years of the reforms, and the share of FDI to the zones decreased in the 1990s.

However, I believe the SEZs benefited the economic development of China to a big extent, through speeding up the economic growth process, acting as economic laboratories allowing China to implement capitalism in a controlled manner, creating spillover effects, attracting FDI and foreign technology, and increasing exports. That being said, I believe China could have achieved high levels of economic growth even without the SEZs. It would have been more difficult, and probably resulted in less growth and a slower pace of development, but it would not have been impossible. The reform-minded and pragmatic leadership under Deng would have promoted economic reforms in one way or another. Establishing the SEZs were the right policy, but growth and development could also have been achieved without them,
although more time would probably have been required in order for China to reach its current level of development.

### 6.6 Chapter Summary

At the start of this chapter, I presented the following set of thesis questions:

- *What were the government’s policies towards the SEZs?*
- *Why were the SEZs established and how did they contribute to China’s economic growth and the development of its economic system?*

It is difficult to identify a clear strategy of the Chinese government towards the SEZ, but it was characterized by pragmatism and a willingness to pursue economic growth and development through new, experimental policies. Ideology was less important than economic growth, and the Deng administration was not afraid of capitalist influences. Capitalism was justified by indirectly stating that it was combinable with socialism, using phrases such as “capitalism with Chinese characteristics”.

The market was allowed to play a bigger role, and capitalism was introduced to China. The government emphasized autonomy for the SEZs, and decentralization was evident for the first time. The zones were to a big extent administered by local authorities, and had much freedom in how they operated. They were intended to be economic, capitalist laboratories in China, and thus quite extensive policies were introduced, both by central and local governments. Legal and regulatory frameworks were adopted, meant to assist the market economy and improve the conditions for foreign investors and private businesses in the zones. While much autonomy was given to the zones, Beijing probably had more control over them than what it might seem. The SEZs were to gradually introduce capitalism to China, but Beijing made sure that this happened in a controlled manner and that no uncontrolled or unintended consequences occurred.

Increasing exports and FDI inflows were important goals of the SEZs, and in order to achieve them, the government’s strategy was to give flexibility and predictability to foreign investors, as well as various economic benefits and possibilities to both exporting firms and foreign investors. The presence of foreign firms was allowed, and Chinese-foreign JVs could be set
up. The coastal areas were intended to lead the export-oriented growth, and it was hoped that exports and FDI could assist China in upgrading its technology and industrial structure, improve the practices of domestic firms, create spillover effects, increase revenues of foreign currency, and create jobs. Increased exports could help pay for necessary imported components. Locating the SEZs on the coast was done partly because these areas had more experience with production, were more advanced, and had more skilled labor. It was also done in order to take advantage of overseas Chinese living in these areas. A non-economic part of the strategy towards the SEZs was to prepare Hong Kong, Macao, and Taiwan for reunification with the mainland, and show that China would allow them to keep their economic systems under the “one country, two systems” policy.

The SEZs have without a doubt contributed much to the growth of the Chinese economy, and affected the changes seen in its economic system. The GDP of the zones grew rapidly, especially that of the Shenzhen SEZ. The SEZs accounted for a substantial share of China’s total GDP, and without them the Chinese economy would likely have grown less and slower. The SEZs represented a large share of total Chinese exports, something that contributed to increased revenue, employment, and foreign exchange accumulation, as well as the experience and knowledge the exporting firms gained. The SEZs were successful in attracting FDI, and especially in their early years did they attract the majority of FDI to China. While China likely would have received large FDI inflows even without the zones, the total amount of FDI could have been smaller. It is hard to assess the spillover effects from FDI, but other areas of China were likely positively affected by FDI and the presence of foreign firms in the SEZs. The Shenzhen SEZ performed better than the other initial zones, partly due to its location next to Hong Kong and its willingness to experiment with new policies not evident in other zones.

The SEZs greatly affected the developments of China’s economic system through acting as capitalist laboratories. This allowed China to experiment with a new economic system without having to implement it nationwide. Many of the developments of the SEZs have later been implemented in other areas of China. As “windows to the world”, the SEZs exposed China to foreign technologies and know-how. The reunification with Hong Kong in 1997 happened without many issues, something that the visible capitalist developments in the SEZs could have contributed to. I believe China would have achieved rapid economic growth
even without the SEZs, due to their pragmatic leadership, huge domestic market, and big and low-paid labor force, but that the economic growth would have been slower.
Chapter Overview
This is the second of the two analytical chapters of this thesis. I present the following set of thesis questions the chapter seeks to answer:

- Has China successfully managed to upgrade its industrial structure after 1978?
- Have the attempts at upgrading it been in line with a comparative-advantage-following or a comparative-advantage-defying strategy?

After looking at how the industrial structure of China has developed after the economic reforms, I evaluate whether China has successfully managed to upgrade it. The chapter continues with an analysis of this process. The indicators are primarily policy statements and official Chinese data, if available. Have the attempts of upgrading been in line with a CAD or CAF strategy? I look closer at the developments of the auto and textile industries, which have developed quite differently. While the former has clear elements of a CAD strategy, the latter is more in line with a CAF strategy. Like in the first analytical chapter, I look at the case of the Shenzhen SEZ more in-depth. I assess the developments of the industrial structure of the zone, seeking to understand if its development strategy has been one resembling a CAF or a CAD strategy. This enables me to compare the developments in China and in the Shenzhen SEZ.

7.1 Understanding the Developments in China’s Industrial Structure

Today, no one is any longer overwhelmed by the economic growth China has experienced over the last decades, and in a way, China’s economic growth is “old news”. While there is some difference of opinion on the exact way China has developed, no one would argue that the country is an important player in the contemporary international economy.
Like the economy in general, the industrial structure of China has developed much after its economic opening-up. Understanding the developments in China’s industrial structure is valuable when evaluating its economic growth. It can also help us predict the future of China’s economy, as long as other factors such as China’s political development and financial and monetary positions are kept constant. The experiences of China might be of importance to the developing countries of today, helping them understand how they best can upgrade their industries and achieve economic growth.

7.1.1 The Developments of China’s Industrial Structure

Prior to the economic reforms, there was a limited amount of innovation in China. One problem was that the large SOEs, unlike private businesses in a free market, did not have to worry about such “unpractical” things as profits and innovation. They lacked the autonomy and desire to pursue innovation (Zhang, Zeng, Mako and Seward 2009).

As stated earlier in this thesis, industrial growth under Mao was at times quite high. The reason why this was not very positive was that until the economic reforms, that growth was concentrated in a few industries, such as steel, coal, and electricity. Light industries increased much less than heavy industries, and luxury goods disappeared from the market. The technological capacity of the Chinese industry was low and it was highly capital-intensive, something that was not in accordance with China’s natural endowment structure at the time - abundant in labor, but with scarce capital resources. The economies of Japan and Taiwan, being successful when China was still under the rule of Mao, first focused on producing simple goods before moving on to more advanced products. China under Mao went the other way, and started with pursuing the development of more advanced industries. For example did textile and light industries decrease from a 64 % share of total industrial output in the 1950s, to only 27 % in 1978. This would have been a natural development if it had started developing these products early on, and later moved into more advanced industries. The problem was that the underdeveloped and labor-intensive manufacturing industries were never properly developed in the first place (Naughton 2007: 330).

Developing in “Reverse”

The way China developed after the economic reforms was somewhat different to what many view as the natural course of market development: instead of moving up the value chain, it
has had to move back into the industries that was neglected under Mao. In the Chinese economy in the 1980s and early 1990s, the fastest growing sectors were light, labor-intensive industries (Naughton 2007). For example did production of electronics and communication equipment grow 28% per year between 1980-1995, while furniture production grew at 21.9%, and production of plastic products, nonmetal mining, synthetic fibers, and wood products all grew at a rate above 20% per year. In the same period, overall gross industrial output was 14% annually (Naughton 2007: 331).

As the economy has been reformed and opened up, China has continued to develop its industrial structure, making it increasingly more sophisticated. Around the mid-1990s, the overall industrial restructuring towards simple consumer goods started to come to an end. Their share of total industrial output declined between 1995-2004, whereas the share of such products as electronics and telecommunication equipment rose. The share of machinery and electronics of total exports surpassed 50% in 2003. This can point to a continuous industrial upgrading in China, and that it has produced increasingly more advanced products after its economic reforms began (Naughton 2007).

Table 7: Developments in China’s Industrial Composition, as % of Total Industry. 1978-2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary industry</th>
<th>Secondary industry</th>
<th>Tertiary industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>28.2</td>
<td>47.9</td>
<td>23.9</td>
</tr>
<tr>
<td>1990</td>
<td>27.1</td>
<td>41.3</td>
<td>31.6</td>
</tr>
<tr>
<td>2000</td>
<td>15.1</td>
<td>45.9</td>
<td>39.0</td>
</tr>
<tr>
<td>2010</td>
<td>10.1</td>
<td>46.8</td>
<td>43.1</td>
</tr>
</tbody>
</table>


Table 7 shows the developments in the composition of the three main industries of the Chinese economy between 1978-2010. Primary industry has declined greatly, the secondary industry has not changed much, while the tertiary industry has grown substantially. As the secondary and tertiary sectors of the economy are more capital-intensive and advanced than the primary sector, this can point to an upgrading of China’s industrial structure. One part of the secondary industry that has been notably upgraded is the export of manufactured goods. As shown in table 7, China has been exporting increasingly more sophisticated manufactures.
after 1980. Not only does the changes in the composition of the three main sectors of the economy point to an industrial upgrading; also patterns of upgrading in the secondary sector of the economy are evident. Overall, manufacturing value added grew by 9.8 % annually between 1995-2005, a further illustration of a more advanced manufacturing sector (Vaidya, Bennett, and Liu 2007: 1001).

7.1.2 Developments in the Export Sector

After the start of the economic reforms, an initial expansion of exports came as a result of the government´s efforts, and an important export product was petroleum. Only between 1979-1985, exports of oil and petroleum grew from 11.1 million metric tons to 36.2 million metric tons (Lardy 1992: 696). Despite being the biggest single exported product, representing 20 % of export earnings in 1985, the importance of petroleum decreased after the mid-1980s (Naughton 2007). The export of textiles and light manufactured goods rose rapidly, and as such China´s exports were increasingly shifting to industries were China had a comparative advantage. The composition of China´s exports was diversified and altered due to the reforms in the economic system, such as the decentralization of foreign trade, a reform in the pricing of traded goods, and reforms in the exchange rate and exchange control of the Chinese currency. Also the massive incentives given to exporting businesses and liberal regulations contributed to the rise of foreign trade. From the middle of the decade until its end, the share of capital-intensive primary exports were cut almost in half, whereas the share of more labor-intensive manufactured products increased by around 50 %. By 1995, all the top exported products were labor-intensive goods (Lardy 1992; Naughton 2007).

Figure 6: Growth in China´s Composition of Exports, USD Billion. 1980-2010.

Source: China Statistical Yearbook 2011: 221, Table 6-4.
It has been argued that the changes in China’s export composition is the most direct reflector of an upgrading of its industrial sector (Yue and Evenett 2010). As seen in figure 6 above, China’s total exports have been growing rapidly since 1980. Manufactured exports represent almost the entire growth of total exports. Although the export of primary goods has risen as well, its development is nowhere near as spectacular as that of manufactured exports.

Table 8: Share of Manufactured and Primary Goods as % of Total Chinese Exports. 1980-2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total exports</th>
<th>Primary goods</th>
<th>Manufactured goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>100</td>
<td>50.3</td>
<td>49.70</td>
</tr>
<tr>
<td>1985</td>
<td>100</td>
<td>50.56</td>
<td>49.44</td>
</tr>
<tr>
<td>1990</td>
<td>100</td>
<td>25.59</td>
<td>74.41</td>
</tr>
<tr>
<td>1995</td>
<td>100</td>
<td>14.44</td>
<td>85.56</td>
</tr>
<tr>
<td>2000</td>
<td>100</td>
<td>10.22</td>
<td>89.78</td>
</tr>
<tr>
<td>2005</td>
<td>100</td>
<td>6.44</td>
<td>93.56</td>
</tr>
<tr>
<td>2010</td>
<td>100</td>
<td>5.18</td>
<td>94.82</td>
</tr>
</tbody>
</table>


Table 9: Composition of China’s Export of Manufactured Goods as % of Total. 1980-2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total export of manufactured goods</th>
<th>Chemicals and related products</th>
<th>L. textile, industrial/ rubber/metal prod., minerals</th>
<th>Machinery and transport equipment</th>
<th>Miscellaneous products</th>
<th>Products not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>100</td>
<td>12.44</td>
<td>44.41</td>
<td>9.36</td>
<td>31.49</td>
<td>2.30</td>
</tr>
<tr>
<td>1985</td>
<td>100</td>
<td>10.04</td>
<td>33.23</td>
<td>5.71</td>
<td>25.78</td>
<td>25.24</td>
</tr>
<tr>
<td>1990</td>
<td>100</td>
<td>8.07</td>
<td>27.22</td>
<td>12.09</td>
<td>27.46</td>
<td>25.16</td>
</tr>
<tr>
<td>1995</td>
<td>100</td>
<td>7.14</td>
<td>25.33</td>
<td>24.67</td>
<td>42.85</td>
<td>0</td>
</tr>
<tr>
<td>2000</td>
<td>100</td>
<td>5.41</td>
<td>19.02</td>
<td>36.92</td>
<td>36.95</td>
<td>0.10</td>
</tr>
<tr>
<td>2005</td>
<td>100</td>
<td>5.02</td>
<td>18.11</td>
<td>49.41</td>
<td>27.24</td>
<td>0.23</td>
</tr>
<tr>
<td>2010</td>
<td>100</td>
<td>5.85</td>
<td>16.65</td>
<td>52.15</td>
<td>25.24</td>
<td>0.10</td>
</tr>
</tbody>
</table>


Note: calculation of percentage undertaken by myself.
Table 8 above illustrates how both primary and manufactured exports represented around 50% each of China’s total exports in 1980. This composition shifted rapidly after 1985, and in 2010 primary goods represented a share of only 5.2%, whereas manufactured goods accounted for 94.8%. High-tech exports as a percentage of total manufactured exports increased from 6% in 1992 to 26% in 2011 (World Bank 2014). Table 9 shows the composition of various sub-categories of manufactured goods as a percentage of total exports of manufactured goods. Production of machinery and transport equipment are more technologically advanced than chemicals, textile, and metallurgical products. The changes illustrated in tables 8 and 9 can point to a move up the value chain and that China has upgraded its industrial structure and the products it export (Wong 2012).

One major point of Rodrik (2006) is that China’s export bundle is more sophisticated than it “should” be if it was based on its comparative advantages, and that it resembles a country with a per capita income three times that of China (Rodrik 2006). Schott (2006) finds that China’s exports has increasingly overlapped with more developed countries in the period 1972-2001. Its exports are more sophisticated than those of countries with similar relative factor endowments, and they have been increasingly similar to those of OECD countries. This points to the increased sophistication of China’s exports, and it indicates industrial and technological upgrading. However, a negative finding is that Chinese exports have been selling at increasingly lower prices than what could be assumed from its GDP levels.

Cui and Syed (2007) argue that the typical view of China as the “world’s assembly line”, where cheap labor in coastal factories are assembling imported parts into products to be sold abroad, with limited value retained in China, might be wrong. This is due to the increased share of total exports by capital equipment and intermediate goods, illustrating China’s ability to produce more sophisticated products. They conclude their study by claiming that the traditionally strong relationship between imports and exports, as a result of processing trade, may be weakening due to increased production capabilities and FDI inflows.

7.2 China’s Industrial Structure Has Been Upgraded, but Still Faces Challenges

While one should not overstate the industrial development that has been happening in China after the economic reforms, one also has to recognize the progress the country has achieved.
Overall, the industrial structure of China has been upgraded and become more advanced, and China has successfully managed to move up the value chain. Manufacturing value added has grown rapidly after the start of the economic reforms, and China’s comparative advantages have been shifting. The heavy industries that were important under Mao have lost much of their significance after 1978, and labor-intensive manufacturing has gained momentum. China managed to develop the industries it neglected for many years, and those industries were more in accordance with its natural endowment structure and comparative advantages. The domestic value added ratio of China’s exports has increased, and it uses domestically produced rather than imported content to a bigger extent than before (Kee and Tang 2013).

Much of the development in China’s industry resembles the experiences of the East Asian Tigers. Although individual national factors have affected how each country has developed, the earlier developers of East Asia also had to put in deliberate efforts at upgrading their industries. As such, the Chinese development is following a trend seen in nearby countries, an argument for why these countries can be grouped together in an EADM. However, while there are similarities in many aspects of the development of the East Asian countries, the scope of China’s manufacturing sector, and the effect it has had on world markets, is bigger than in the other countries (Yue and Evenett 2010).

**China Has Come a Long Way, but Will Have to Continue its Development**

While China has to a big extent managed to upgrade its industrial structure after 1978, it is still lagging behind more developed countries. Much of the goods produced in the country are in the lower end of the value chain, and processing and manufacturing of goods are still an important part of its industrial activity (Yue and Evenett 2010). China is certainly not a world leader in high-tech industries. While it has increased the amount of technological products as a share of total exports, and one classification label almost one-third of China’s exports “high-tech” as of 2005, these exports still to a large extent revolve around the assembly of imported components or parts produced with the help of foreign technologies. One example is Apple products, which are made in China, but where most of the revenue goes to an American company. Apple provides the technology, design and marketing, while the labor-intensive assembling of the phone is done in China (Koopman, Wang, and Wei 2008: 1). Kraemer, Linden, and Dedrick (2011) estimate that China captures around USD 10 from producing an iPad, iPhone, or iPod, products that retail for hundreds of dollars. The imported content used in production has become more advanced, but the Chinese production
techniques have not seen a similar development and have not necessarily become more skill-intensive (Amiti and Freund 2007; Yusuf and Nabeshima 2007). Some of its main areas of expansion in the 1980s- and 1990s were low-tech and labor-intensive industries with minimal spillovers to technological development. Even the high-tech products it has been exporting, such as laptops, has contributed little to the development of domestic production capabilities (Naughton 2007).

With the increase in exports of consumer electronics and computers, it can initially seem like China has gone through a process of upgrading its natural factor endowment structure and created comparative advantages in new industries. However, much of the growth in electronics and similar industries has been through an increase in processing and assembling (Zhang et al. 2009). While the products exported might be higher up the value chain, that does not mean the products China exports today are that much more skill intensive. Statistics can be misleading, because a country can produce simple products that are labeled “high-tech”. Electronics and communication equipment is considered high-tech, but a low-tech product like calculators is included in this category (Vaidya et al. 2007: 1004).

Rising costs and increased industrial capacity both in China and in the world is reducing the profit margins in China’s existing industries; profit margins that have been relatively low in the first place, as much of China’s exports traditionally have consisted of simple and cheap products without much domestic technological input. Revenues have been further squeezed in later years as the RMB has appreciated and wages has increased along with China’s overall economic growth. Furthermore, competition from other low-wage countries in the Greater Mekong region coupled with rising wages in China has removed much of China’s advantage in producing goods cheaply. The rising costs of production in China’s coastal areas have affected firms producing labor-intensive goods. For example, in 2007 15 % of shoe manufacturers in the city of Dongguan closed or relocated to other regions in China or other Asian countries (Yue and Evenett 2010: 14). To some extent, the high production costs can be countered by the infrastructure offered in China, the skilled labor force, and the experience it has in manufacturing, elements that might be less evident in other countries with lower wages. China’s huge internal market might also make it attractive to keep production in the country despite rising costs. Relying on simple, cheap, and labor-intensive manufacturing in the future to the same extent that it has in the past is probably not a viable strategy (Yue and Evenett 2010).
With the traditional comparative advantages of China gradually shifting, along with greater experiences in new industries and better technological capabilities, China has to put in serious efforts at continued industrial upgrading in order to be able to compete and maximize revenues in the future. It has been increasingly important for China to move up the value chain and lessen its dependency on the assembling of foreign, high-tech products. This can be achieved if China manages to continue to strengthen and increase its technological capabilities (Wong 2012; Yusuf and Nabeshima 2007).

7.3 Industrial Upgrading Through Following or Defying Comparative Advantages?

While China’s industrial structure is still lagging behind that of more developed nations, its industrial composition and exporting industries have been rapidly developing. An interesting point in this regard is whether China’s process of industrial upgrading most resembles a CAD or a CAF strategy.

The positions of Lin and Chang, and the CAF versus the CAD development strategy, have been thoroughly explained in earlier parts of this thesis. I find it harder to analyze the industrial developments of China than that of other East Asian countries such as Japan, Taiwan, and South Korea. This is natural as these other countries have been developing for a longer time, and are more developed and transparent as of today. We would surely be able to say more about China’s developments as well in ten or twenty years from now. There are more clear-cut examples of the government successfully picking winners in South Korea than in China. One industry with a similar development in both China and South Korea is the auto industry, which has been actively protected and promoted by both governments, although the earlier established South Korean auto industry is more developed and successful than its Chinese counterpart.

7.3.1 Arguments Supporting Industrial Upgrading Through a CAD Strategy in China

A CAD strategy is essentially about strategically defying one’s comparative advantages. Due to a developing country’s factor endowment structure, private firms cannot compete in open,
free markets, and thus has to be protected by the government until they are able to. This will allow it to move up the value chain and upgrade its industrial structure. A central point of Chang is that a developing country cannot wait until its factor endowment structure has been upgraded “naturally”; instead it has to deliberately violate its comparative advantages and enter more advanced industries before the factor endowment structure has been altered. In this section, I lay out arguments showing how elements of a CAD strategy have been prevalent in the development of China’s industrial structure.

**China’s Export Bundle is Similar to That of a Country With a Higher GDP**

As noted earlier, Rodrik (2006) finds that China’s exports are skewed towards high productivity goods. In 1992, its exports were similar to that of countries with a GDP per capita more than six times that of China. Although this number has decreased since then, China’s exports are still higher than what it should be, based on its per capita GDP. A country like Bangladesh, for example, has a factor endowment structure similar to China, but still an export basket with a level of productivity around 50% less. This is an important observation because there is a correlation between a country’s level of productivity in its exports and its level of economic growth. Had China exported only those products it could be expected to export based on its income level, its economic growth could have been less significant. Exporting high productivity goods is beneficial for economic growth because when some investors engage in high-productivity export activities, others are attracted to the same sectors, causing a transfer of resources from lower to higher production activities (Rodrik 2006).

The fact that China managed to not only produce such advanced goods, but also export them, with a backward factor endowment structure, presents issues for scholars such as Lin. He would claim that China has managed to upgrade its industrial structure because rational firms entered industries where they had a comparative advantage. China’s comparatively sophisticated exports relative to its GDP resemble the developments of Japan and South Korea. Japan were promoting capital-intensive and relative sophisticated industries like car and steel production, and shipbuilding, when its GDP per capita was only 19% of that of the U.S. South Korea promoted many of the same industries when its GDP per capita was only 5.5% of U.S. GDP per capita (Lin and Chang 2009: 497).
FDI and Foreign Firms Attracted by the Government Contributed to Industrial Development

FDI and the presence of foreign firms have contributed to China’s industrial development. They have exposed China to more advanced technology and better managerial skills, and provided much-needed capital. As it has been pointed to earlier in this thesis, the activities undertaken by foreign firms in developing countries is often labor-intensive and low-skilled manufacturing, so one should not overstate the technological spillovers to China. Still, the presence of foreign actors benefited China and helped develop its market and its increasingly capitalist economy.

Their presence was made possible by the efforts of the government. If the central government had not allowed FDI inflows and the creation of the SEZs, China’s exposure to foreign inputs would have been less. The government also facilitated the activities of foreign firms in the SEZs through developing a legal system, simplifying bureaucratic procedures, creating incentives, giving them freedom in how they operated, and so on. The deliberate government interventions in the economy, creating the necessary conditions for foreign investments, indirectly contributed to the development of China’s industrial structure. Without the government, private actors would probably have had less interaction with foreign firms, and fewer possibilities to develop the skills needed to move into more advanced industries. There is empirical evidence that FDI has contributed to filling technological gaps in China, through the introduction of more advanced technology. Increasing competition between firms has also led to an upgrade of China’s technological level, and favorable R&D policies to foreign firms might have increased the amount of research they have undertaken. The use of local suppliers by foreign companies has caused technological spillovers because foreign firms often impose specific requirements on local producers (Long 2005).

China Protected its Electronics Industry

Chang criticizes the notion of perfect factor mobility that is assumed in the Heckscher-Ohlin-Samuelson take on the theory of comparative advantage. He does not agree with the idea that resources can be freely moved from one industry to another. The fact that the Chinese textile industry was successful, for example, does not mean that the capital and skills accumulated in this industry could be used to upgrade China’s factor endowment structure and create comparative advantages in a capital-intensive industry like electronics (Lin and Chang 2009).
Chang argues that the governments of developing countries have to protect the firms in the industries in which they do not have a comparative advantage. A country cannot simply “wait” with entering a new industry before it has altered its factor endowment structure. Being able to compete internationally requires learning and is something new firms have to go through. According to a CAD strategy, this is why the government of developing countries will have to protect infant-industries and strategically violate the theory of comparative advantage, entering new industries before the factor endowment structure has been altered (Lin and Chang 2009).

According to the logic of a CAF strategy, China’s success in light manufacturing should have contributed to upgrading its factor endowment structure and made it possible for new firms to enter more capital-intensive industries like the electronics sector. However, this is not what happened. The electronics industry in China, which has become increasingly successful with international giants such as Huawei and ZTE, was heavily subsidized and protected by the Chinese government for years. China became the world’s biggest exporter of electronics in 2004, and the second largest producer in 2005 (Zhao, Huang, Ye, and Gentle 2007: 33). This industry benefited greatly from FDI and transfer of technology, but not only private enterprises facilitated the growth of this industry. Making the electronics industry a priority industry, and establishing such offices as the Ministry of Electronics Industry and the Ministry of Information Industry, as well as plans like the Strategy of Promoting Trade by Relying on High-tech of 1999, contributed to its growth. The government protected and assisted it through for example establishing technical standards, banning imports of certain components, and regulating access to the domestic market (Zhao et al. 2007).

The development of the heavily supported and protected electronics industry is an argument illustrating elements of a CAD strategy in China. In the view of Chang, firms cannot necessarily enter new and more capital-intensive industries due to the lack of perfect factor mobility. Even if the factor endowment structure of a country is altered, resources cannot readily be transferred from one industry to another. Therefore, government protection might be needed even if the necessary factor endowments are in place, and firms in theory should be able to enter more advanced industries.
7.3.2 Arguments Supporting Industrial Upgrading Through a CAF Strategy in China

As opposed to Chang, Lin claims that the best strategy to alter the factor endowment structure and achieve industrial upgrading is by entering those industries where one has a comparative advantage. This will upgrade the factor endowment structure and allow profit-maximizing firms to enter more advanced industries and continue to upgrade the industrial structure. Hence, an important point is that a country has to utilize the comparative advantages of today, and not the advantages it might have in the future. In this section I show how also elements of a CAF strategy have been evident in China’s industrial development.

China Followed its Comparative Advantages to a Certain Extent

Lin (2007) claims that a country’s factor endowment structure has the biggest influence on the technology and industries it chooses to develop. The factor endowment structure might be altered, and is defining in which industries a country has a comparative advantage at a given point in time. According to Lin, a country following its comparative advantages will be the most competitive, produce the largest surplus, accumulate the largest amount of capital, and upgrade its endowment structure the fastest.

China’s industrial focus moved from the capital-intensive industries it had operated in under Mao, and into light and labor-intensive manufacturing after the economic reforms. This was in accordance with its given factor endowment structure and comparative advantage, which was in labor-intensive manufacturing activities (Lin and Chang 2009). As much of the emerging industries were competitive, the Chinese export sector thrived and became successful. The firms were viable, and China did not attempt to develop excessively capital-intensive industries, something many governments in developing countries have (Lin 2007). It can be argued that China did follow its comparative advantages and a CAF strategy to a large extent. China could draw on already developed technology from more advanced countries, and this was important to the economic growth of both China and other East Asian economies (Lin and Chang 2009).

Lardy (1992) argues that China’s increased export activities has been the result of its ability to realize its comparative advantages. Labor-intensive products have made up an increasingly bigger share of total exports, and the importance of primary exports has simultaneously
declined. Private firms and the market have contributed to this shift, which is in accordance with a CAF strategy, where profit-maximizing actors enter those industries where they have a comparative advantage.

**The Government Promoted R&D, Innovation, and Technological and Infrastructural Development**

The government has taken measures to improve China´s capabilities in innovation and technological development. The full-time equivalent of R&D personnel went from 0.75 million in 1995 to 196.5 million in 2008, and R&D expenditure as a share of total GDP rose from 0.5 % to 1.54 % (Wong 2012: 141; Zhang et al. 2009). R&D figures are only one way to consider the efforts at industrial upgrading; between 1978-2002, USD 225.7 billion was spent on importing technology. However, as China increasingly has sought to develop its capacity in innovation, and decrease its reliance on technology imports, spending has been shifting from imports to R&D (Zhang et al. 2009: 6). The substantial investments China has made in R&D, and incentives such as tax breaks, preferential procurement, and subsidized credit from the government, has probably been an important factor why China has managed to climb the technological ladder.

The central and local governments have also assisted in developing infrastructure and various institutions. Market failures in developing countries can lead to information externalities and co-ordination problems, and it is uncertain whether private firms on their own could have developed the vital infrastructure and institutions necessary for economic growth and industrial upgrading. Economic innovations provide information on the profitability of market opportunities. This information is freely available not only to the firm undertaking the innovation, but also competing firms. The benefits of innovation do not necessarily reflect the costs of being the first firm to enter a new industry or to take advantage of new technology. Government subsidies can help offset this. A developing country needs to upgrade its infrastructure and institutions. As individual firms cannot undertake such responsibilities in a cost-effective manner, the government can assist in this development, or co-ordinate the activities of many different firms (Lin and Chang 2009).

The role of government in promoting R&D, innovation and the development of infrastructure might at first seem like an argument why China´s industrial upgrading has resembled a CAD strategy. However, government interventions undertaken to develop the market and the
institutions needed for economic growth is something Lin supports. The efforts undertaken by central and local authorities in order to correct market failures are one element of the Chinese developmental strategy that is in line with what a CAF strategy prescribes.

7.4 Two Industries With Elements of a CAF and a CAD Strategy

The two industries below are included to exemplify how elements of both a CAD and a CAF strategy have been evident in China’s industrial development.

7.4.1 The Auto Industry – Defying Comparative Advantages

China produced only 220,000 motor vehicles and 5,400 cars in 1980. In 2006, this number had risen to 7.3 million vehicles and 3.9 million cars. Its share of global motor vehicle output grew from 0.4 % in 1978 to 12.2 % in 2007 (Zhang et al. 2009: 7-8). One can certainly question whether China did in fact have the necessary endowment structure, the capital resources, and the technological capabilities needed to warrant an entry into a relatively capital-intensive industry like auto manufacturing. The auto industry was designated as a pillar industry by the government at an early stage of the economic reforms. While China did produce a limited amount of cars - mainly trucks - at the time, it was clear that this was an industry the government wanted to develop. In 1984, Premier Zhao expressed the desire for upgrading the auto industry to world standards by 1990 (Yueh 2011).

A government’s desire to develop an industry does not necessarily imply that a CAD strategy is pursued, as the government can attempt to develop an industry through giving incentives to private firms and limit its interventions in the industry. Still, I would argue that the way the Chinese government supported the auto industry has strong features of a CAD strategy. Its development was pursued through relying on FDI and establishing JVs, something that positively influenced it (McKinsey Global Institute 2003; Yueh 2011).

Establishing JVs in the Auto Industry

In 1984, the first major manufacturing Chinese-foreign JV after the Cultural Revolution was established in the auto industry. The vast potential of China’s domestic market was a strong attractor of FDI (Gallagher 2006; McKinsey Global Institute 2003). After some disagreement
inside the government over the future strategy for the Chinese auto industry, an industrial policy was created in 1994. The numerous different auto manufacturers was to be consolidated into a few major players, Chinese manufacturers were protected from foreign competition, JVs were required to used at least 40 % locally produced content, and the private ownership of cars was encouraged in order to increase demand (Gallagher 2006). Prior to this policy, the foreign part of a JV was free to choose what technologies to transfer, and how it would do so. The later local content requirement forced the foreign firms to work with domestic producers and improve the quality of their output (Yueh 2011). However, the cooperation between the Chinese and foreign firms did not turn out to be as successful as the Chinese government had hoped. The amount of foreign know-how that had been gained was limited, and few passenger cars were produced by the 1990s, despite the government’s desire to do so (Gallagher 2006). In 2004, the Chinese government reaffirmed its support for the integration of foreign technologies into domestic production, and continued to encourage industrial restructuring that would create large conglomerates. Further R&D was also supported, in order to lay the foundation for continued technological upgrading and capacity building (Yueh 2011).

There were over 130 auto manufacturers in China in 2004, and this number had supposedly risen to 150 in 2007, despite the government’s efforts at consolidating and restructuring the industry and reducing its amount of firms. In 1986, three companies were singled out to become the major players of the industry. These three accounted for 67 % of the sedan market as of 2002, and the year after they produced 1.38 million sedans combined. Each of them formed JVs with foreign partners, and had a market share of 48.7 % in 2008. Also domestic manufacturers without foreign linkages have emerged, capturing a 30 % market share in 2009 (Yueh 2011).

The automobile industry is an example of the Chinese government’s desire to upgrade its industrial structure and develop more advanced industries than what it already had at the start of the Open Door policy. After a slow start, the industry picked up the pace and in the 1990s it contributed a lot to the Chinese economic growth. In the more recent years it has continued to grow and established itself as a solid industry capable of creating growth (Gallagher 2006). During the development of this industry, the government protected it through high tariffs on imports, local content requirements, foreign equity limits, and government-controlled distribution. After China joined the WTO in 2001, the industry was liberalized. The local
content requirement was removed and tariffs were reduced (McKinsey Global Institute 2003; Yueh 2011).

**Did Entering the Auto Industry Violate China’s Comparative Advantages?**
The Chinese auto industry has undoubtedly developed significantly after the government first singled it out as a pillar industry it would support. Production has greatly increased and China is also exporting more cars abroad. It has benefited greatly from being designated a pillar industry, and the establishment of JVs and local content requirements have helped domestic manufacturers increase their skills and technological capabilities. Based on China’s factor endowment structure when the auto industry started to develop, it is clear that it did not have a comparative advantage in car manufacturing. From a CAF perspective, it lacked the necessary skills and capital that would make it rational for private firms to enter the industry.

A proponent of a CAF strategy could claim that the Chinese auto industry could have been developed without extensive government support, and that private actors would have entered such a relatively advanced and capital-intensive industry when the timing was right (i.e. when the factor endowment structure had been sufficiently upgraded). However, China would likely not have accumulated the sufficient capital resources enabling private firms to enter the industry until several years after it actually started to develop. This would have delayed the process of gaining experience, developing and importing technologies, and building capacity, and the result could have been a less competitive auto industry today. China would also have lost out on the positive effects the developing auto industry has provided over the last decades, such as increased employment, higher wages, lower prices, higher quality and a bigger variety of cars, and tax revenues (McKinsey Global Institute 2003).

A lack of local content requirements could have hurt domestic suppliers. With this law, the foreign part of JVs was forced to assist the development of domestic producers. In addition, without government support, the auto manufacturers would perhaps never have been able to compete with foreign firms, or it would take a substantial amount of time before they could. While the Chinese auto industry is still developing, and less advanced than in other countries, I would still claim that China successfully managed to defy its comparative advantages when it first started to develop its auto industry. The result has been a relatively successful industry it otherwise might not have had.
7.4.2 The Clothing and Textile Industry – Following Comparative Advantages

While China can be said to have defied its comparative advantages when entering the auto industry, the development of the clothing and textile industry has been more in line with a CAF strategy, although the government also intervened in this industry.

China was originally a major exporter of textiles in 1950, but the heavy-industry development strategy pursued under Mao caused it to lose much of its previous market share. In 1970, its global clothing market share was less than 5%. When China opened its economy, it once again focused on the textile industry. China’s enormous and low-paid labor force at the time presented a significant comparative advantage in simple, labor-intensive industries. Despite the natural comparative advantage, the industry was still promoted through the “Six Priorities”-policy. Preferential policies resulted in a high annual growth rate for the textile and clothing industries. When export-oriented development later was pursued, the textile industry was again prioritized. In 1995, China became the world’s biggest exporter of textile and garments, and in 2002 it captured an impressive 18% share of the world market (Yueh 2011).

After the promotion of capital-intensive industries, China’s trade pattern started to adjust to its comparative advantage after the economic reforms. While the textile industry was dominated by SOEs in the beginning, private actors like TVEs gradually became more important (Yueh 2011). In many respects, entering the labor-intensive textile industry was in line with a CAF strategy. This industry reflected China’s given factor endowment structure at the time, and by succeeding in this industry, China could accumulate capital and upgrade its factor endowment structure, enabling firms to move into more advanced and capital-intensive industries. However, the substantial amount of government protection given to manufacturers in the textile industry is not in line with a CAF strategy, where excessive government support should not be necessary. However, textile producers could very well have been successful even without the government’s support and favorable conditions. Also the fact that TVEs - which likely received less support than the SOEs - did very well in the textile industry shows that following its comparative advantage has been the right strategy for China, at least in some industries. Furthermore, it has illustrated that firms can prosper without government protection and support.
The Chinese economy has a history of vast government control and interventions by the state. Thus, finding a clear-cut example illustrating elements of a CAF strategy in China’s industrial development is probably not possible. While the textile industry received much government support and protection, it is still one empirical example illustrating how also elements of a CAF strategy have been evident in China’s industrial upgrading.

### 7.5 Shenzhen’s Industrial Development

After the Shenzhen SEZ was set up as one of the initial four SEZs in the early 1980s, it has been transformed from a small fishing village to a high-tech hub with a drastically altered industrial structure. It performs as well as a medium-sized Chinese province, its economic output is the fourth highest among major Chinese cities, and its GDP per capita and its international trade as a share of GDP is the highest in the nation (Yuan et al. 2010).

#### 7.5.1 The Developments of the Shenzhen SEZ

Like in the other SEZs, the Shenzhen SEZ had much focus on attracting FDI. Shenzhen managed to create big inflows of FDI and represented a substantial part of the total FDI to China’s open areas. The proximity to Hong Kong was highly beneficial as it was a major source of FDI to both Shenzhen and other SEZs. Low transportation costs and a common language and culture made it attractive for investors to place their money in Shenzhen. Agricultural reforms released surplus labor and supplied foreign companies with low-paid workers, and economic incentives were given to foreign investors (Wei 2000). Shenzhen has gradually increased the scale of its industry and increasingly produced more technologically sophisticated products. The industrial growth of Shenzhen has been the most important factor in the development of its economy and growth of its GDP (Yuan et al. 2010). As early as 1998, high-tech industries accounted for around 40% of Shenzhen’s industrial output (Wei 2000).

The lack of developed infrastructure and institutional, legal, administrative, and financial frameworks in the early years of the zone was one of the reasons why a vast majority of its incoming FDI went to such areas as tourism and real estate development instead of manufacturing. After investing in infrastructure, assisted by contributions from foreign
investors, and improving legal and bureaucratic structures, FDI to manufacturing industries started to increase around 1982 (Wei 2000).

As Shenzhen continued to develop, the cost of land and labor rose drastically. Other, less developed areas of China were becoming more attractive to many foreign companies operating in labor-intensive industries. Due to the increased competition from inland China, as well as the realization that technological capabilities were important in order to continue the process of industrialization, the local government increasingly focused on building up technology-intensive industries. Shenzhen initially expanded through processing and assembly activities, as well as trade, but increasingly promoted the development of high-tech industries (Yuan et al. 2010). In order to attract better technologies, the economic incentives in the zone were further increased to those firms operating in more high-tech industries. The Shenzhen government also increased its efforts at R&D and at protecting intellectual property (Wei 2000; Zeng 2011). The industrial structure of the Shenzhen SEZ has evolved continuously since it was first established, and the production activities going on in the zone today are much more technologically advanced and capital-intensive than 30 to 40 years ago. The industrial sector has been the driving force of Shenzhen´s economy. In 1979, the contribution of the industrial sector in the GDP growth was only 11.8 %. In 1994 it had risen to 43 %, and after that it has never been lower than 40 % (Yuan et al. 2010: 59).

The government of Shenzhen has managed to promote industries using more advanced technologies. The total gross output value of high-tech industries increased from USD 0.34 billion 1991 to USD 111.42 billion in 2007. The exports of high-tech products and patent applications have also been rapidly increasing, illustrating a shift from importing to developing technology. Both in value-added and in its contribution to GDP, Shenzhen´s high-tech industry ranks higher than other major Chinese cities like Beijing, Shanghai, and Tianjin (Yuan et al. 2010: 62).
As seen in figure 7 above, the industrial composition of Shenzhen has been drastically altered after 1979. The three main sectors of the industry had a relatively equal share of the GDP at the start of the SEZ experiment, with 37%, 20.5%, and 42.5% each for the primary, secondary, and tertiary industry. As the figure illustrates, the primary sector was virtually non-existent in Shenzhen’s industry as of 2010. The secondary industry has more than doubled to a share of 47.2%, whereas the tertiary industry has grown to 52.7% (Shenzhen Statistical Yearbook 2011: 10, table 1-4). In China as a whole, the primary industry accounted for a share of 10.1% of GDP, the secondary industry 46.8%, while the tertiary industry represented 40.1% (China Statistical Yearbook 2011: 45, table 2-2). The fact that Shenzhen has eliminated the primary industry from its economy, while it still remains significant in China, suggests that the industrial upgrading has been more successful in the Shenzhen SEZ than in China. The tertiary sector, however, is one sector China has managed to increase, something Shenzhen has not. This is probably because the actual share of this sector was much higher in Shenzhen than in China in the late 1970s, and as such the potential for growth was not as big. Also, looking at the actual size of the tertiary sector, and not its developmental pattern, it is clear that it was bigger in Shenzhen than in China in 2005.

The massive growth of the more capital-intensive and advanced secondary and tertiary sectors of Shenzhen’s industry is illustrative of an industrial structure that has been rapidly
changing. The less advanced agricultural sector represented 64.8 % of agricultural-industrial output in 1979, but it soon started to decline and was virtually non-existent in 2010.

As a share of industrial output, light industry initially accounted for 88.5 % compared to 11.5 % for heavy industry. Light industry was far bigger than heavy industry around the time the Shenzhen SEZ was created, and remained bigger until 2000, when heavy industry represented the largest share with 55.3 %. As of 2010, the industrial structure of 1979 was turned upside down when heavy industry had far outgrown light industry and accounted for 75.2 % of total industrial output (Shenzhen Statistical Yearbook 2011: 6, table 1-3. My calculations).

Both light and heavy industry are more advanced sectors of the economy than agriculture, and Shenzhen’s agricultural sector is almost non-existent as of today. It is complicated to draw clear conclusions on the altered shares of light and heavy industrial output, because they comprise both capital- and labor-intensive industries. However, heavy industries might generally be defined as more capital- and knowledge-intensive than light industries (Businessdictionary.com n.d.). Both the declining agricultural sector, and the increased share of heavy industry, can point to an industrial upgrading in Shenzhen.

**Shenzhen’s Industrial Structure Has Been Upgraded**

I have argued that China’s industry has been upgraded and become more technologically advanced, although issues such as a large product assembly industry and limited spillover effects from the high-tech industries persist. One can argue that Shenzhen has been more successful in upgrading its industrial structure, but differing goals makes it hard to directly compare China and Shenzhen. The SEZs functioned as laboratories and were frontrunners in the Chinese economic growth, and the focus on industrial upgrading has been bigger in the SEZs. They also used vast economic incentives to attract foreign, high-tech companies, something the areas outside them did not do, at least not in the early years of reform.

Shenzhen has become a high-tech hub of China. Already in 1998, it had a large share of the domestic market of various relatively high-tech products, and also a substantial share of the world market for some products. Of the domestic market, the market share of Shenzhen SEZ in floppy disks, motherboards, monitors, and LCD screens were all above 70 %, and it also represented a large part of the market for other products as well. Of the world market, the
Shenzhen SEZ had a 14% share of floppy disks, 23% of watches and clocks, and 10% of magnetic heads (Wei 2000: 202). These products are not the most advanced, but they are still relatively sophisticated, and these numbers are from 1998 when Shenzhen was less advanced than it is today. Shenzhen has increasingly exported more high-tech products. In 2001, it exported high-tech products worth USD 11.37 billion, and in 2010 this number had increased to USD 108.73 billion (Shenzhen Statistical Yearbook 2011: 333, table 15-2). Shenzhen ranked first in China in 2008 in registering new patents (Yeung et al. 2009). The total number of patent applications increased from only 261 in 1991 to 49,430 in 2010 (Shenzhen Statistical Yearbook 2011: 334, table 15-3). When the 11th FYP was launched in 2006, Shenzhen’s economy was described as being made up of four main elements: high-tech industrialization, logistics, finance, and culture industries such as tourism and entertainment (Huang 2008, as referenced in Yeung et al. 2009).

7.5.2 The Shenzhen SEZ: Following or Defying Comparative Advantages?

Naturally, the way Shenzhen developed was not entirely different from the way the rest of China did. The entire SEZ experiment was something set up and led by the central government, and it was the leadership at the time that made it possible for Shenzhen to grow and develop as much as it did. Local authorities facilitated much of the industrial development of Shenzhen, and as such the roles of central and local governments were important. However, private actors and the market did also play vital roles. Rational foreign investors placed their capital in the zone and utilized its comparative advantages. FDI inflows were necessary to Shenzhen’s development.

The vast incentives given to foreign investors in the Chinese SEZs have been outlined. While these might have contributed in attracting FDI, some authors argue that China’s cheap labor and huge domestic market perhaps was even more important. Probably more vital than the economic incentives was the government’s efforts at developing infrastructure, a legal framework, reducing bureaucratic procedures, and giving confidence to foreign investors unfamiliar with and unsure about the Chinese market.

In the early stage of the Shenzhen SEZ’s development, most of the FDI it received went to tourism and real estate development. This required fewer investments, and its inadequate infrastructure and institutional framework at the time did not contribute in attracting FDI to
the manufacturing sector. As these conditions improved, FDI to the manufacturing industry started to increase. In the 1980s, the key industries of Shenzhen were light, labor-intensive manufacturing. Firms became successful and upgraded their technological skills, and capital became relatively more abundant. The factor endowment structure of Shenzhen was gradually upgraded (Wei 2000).

As Shenzhen became more developed, it started to lose its comparative advantage in cheap labor and land to less developed areas of China. The local government focused on attracting more advanced technology and promoting technology-intensive industries. Shenzhen could provide a developed infrastructure and labor that was better educated than elsewhere in China, but still relatively low-paid. Its comparative advantage shifted into more technology- and capital-intensive industries, and it managed to develop more high-tech industries than other areas of the country (Wei 2000). The way Shenzhen’s industrial structure has been upgraded is quite in line with a CAF strategy promoted by Lin. Local authorities did not pursue the development of capital-intensive industries that defied Shenzhen’s comparative advantages, but instead its industrial structure was upgraded in accordance with its natural factor endowments, and the industrial structure gradually became more advanced as technological capabilities and the abundance of capital increased.

Shenzhen did not have a completely free market with a limited government, and is not a perfect example of development through a CAF strategy. The government for example provided incentives to foreign investors both in Shenzhen and the other SEZs. The Shenzhen SEZ gave additional incentives to high-tech manufacturers that perhaps were even more substantial than in the other zones. Still, its developmental process has many elements of a CAF strategy, and especially so compared to other Chinese cities. As opposed to China in general, private, foreign corporations were more involved in its industrial activities than SOEs, and the way the industrial structure was upgraded is partly a result of the rational actions of private firms. Attempts at strategically defying comparative advantages through industrial development were not made, as it was elsewhere in China. The role of the local government was mainly confined to developing Shenzhen’s missing market, and developing infrastructure and institutional frameworks. The government is encouraged to perform such roles under a CAF strategy.
7.6 Chapter Summary

At the start of this chapter, I presented the following set of thesis questions:

- Has China successfully managed to upgrade its industrial structure after 1978?
- Have the attempts at upgrading it been in line with a comparative-advantage-following or a comparative-advantage-defying strategy?

China after the economic reforms had to drastically alter the way it pursued industrial development. Capital-intensive, heavy industries had been promoted under Mao, and the previously neglected light industries had to be developed. Light and labor-intensive industries were growing in the 1980s and 90s, and China eventually produced more and more sophisticated products such as machinery, electronics, and telecommunication equipment. After the economic reforms, China’s primary industry has greatly declined, while the tertiary industry has increased. The secondary industry has remained quite unchanged.

The initial expansion of exports was government-led and consisted of products such as oil and petroleum. Eventually, also in the export sector did light industrial products and textiles become increasingly important, and most of China’s exports after around 1990 have been manufactured goods. As China’s export bundle has become more sophisticated, the share of labor-intensive and simple products has declined while products such as machinery and transport equipment have been exported to a bigger extent. Some have argued that China’s export bundle are more advanced than what it should be from looking at its level of GDP, and that the view of China as “the world’s factory” no longer is correct.

There is sufficient empirical evidence to conclude that China’s industrial structure has been upgraded. China produces much more advanced products now than what it did at the start of the economic reforms, it exports more sophisticated products, and to a bigger extent than before uses domestically produced rather than imported components. Its comparative advantages has been shifting to more advanced industries, and manufacturing value added has increased. At the same time, China’s industrial structure is less developed than that of more advanced countries. Much of its manufactured goods are still at the lower end of the value chain, and the processing of goods remains important. Many exported products labeled “high-tech” are still dependent on imported and foreign-produced components. While the
products are higher up the value chain, they are not necessarily that much more skill intensive. These products also provide few spillovers to the domestic industries. China will have to continue to upgrade its industrial structure and keep developing its high-tech industries, as rising wages has caused it to gradually lose its comparative advantage in cheap labor. Other countries are more suited for labor-intensive production today and will continue to take such activity away from China in the future.

China’s process of industrial upgrading seems too multi-faceted to claim that it strictly resembles either a CAF or a CAD strategy. The Chinese government is strong and has intervened in many aspects of the economy, and was important in attracting FDI and foreign firms that contributed to its economic growth. It protected its electronics and auto industries, and China’s exports have been more advanced than it “should” have been, according to its factor endowment structure. These elements are in line with a CAD strategy. At the same time, China did follow its comparative advantages to a certain extent. After promoting capital-intensive heavy industries under Mao, industrial activity shifted to labor-intensive industries in accordance with China’s factor endowment structure. The government facilitated R&D, the development of infrastructure and technology, and pursued innovation, something that is in line with a CAF strategy. While the clothing and textile industries did receive government support and protection, entering these industries was also largely in accordance with its factor endowment structure. Private firms succeeded because they had a comparative advantage in these industries, and especially TVEs did very well. Such enterprises did probably receive less government support than the SOEs, and can be said to have developed in accordance with a CAF strategy.

Generally, China’s process of industrial upgrading features both elements of a CAF and a CAD strategy. However, it was perhaps somewhat more in line with the latter, because of its interventionist government and that comparative advantages did not act as the guideline for development, something proponents of a CAF strategy claim they should.

In the last part of the chapter, I briefly evaluated the industrial developments of the Shenzhen SEZ. It has been the most successful of the initial zones, and has a more advanced industrial structure than China overall. Its primary sector is almost non-existent, and it has become the country’s high-tech hub. Its economic development is now driven by advanced economic sectors such as high-tech, finance, and logistics. Shenzhen’s industrial development has been
more clearly in line with a CAF strategy than in China overall. It had a less interventionist government, allowed private firms and comparative advantages to guide the growth of its economy, and focused on developing increasingly advanced industries as its economy grew and its factor endowment structure was altered.
8 Concluding Remarks

This thesis is a study of China’s economic development and the use of SEZs in its economic growth process, its attempts at industrial upgrading, and whether this process has been in line with a CAD or a CAF strategy. These are multi-faceted and complicated topics, and I have tried to answer the thesis questions I presented in a satisfying manner. I have provided a theoretical framework functioning as a foundation for the thesis, as well as outlining the historical developments needed in order to understand the topics of the thesis and the discussion related to them.

The thesis questions have been answered in detail in each of the two analytical chapters, so I will only briefly present the main findings of this thesis.

After a failed developmental strategy under Mao, Deng came to power and launched extensive economic reforms in the late 1970s. China’s development strategy under Deng was characterized by pragmatism and a willingness to let capitalism and the free market play a role in the country’s future. SEZs were used as tools for economic development. They functioned as laboratories where new policies could first be tested out, and opened China up to the world. They had considerable autonomy in their operations, and power was for the first time decentralized. The SEZs were successful tools for achieving economic growth, and contributed to attract FDI, expose China to foreign technology, create spillover effects, develop China’s coastal areas, increase exports, and upgrade its technological capabilities. The Shenzhen SEZ was the most successful of the initial zones, partly due to its location next to Hong Kong and its willingness to experiment with new policies not seen in the other zones. China under Deng would probably have managed to create economic growth even without the SEZs, and China’s vast, low-paid labor force and huge domestic market would likely have attracted foreign investors and economic activity regardless. However, I believe China’s economic growth would have been slower and less impressive without the SEZs.

China has managed to upgrade its industrial structure after its economic reforms. It has increasingly exported more advanced products, and its domestic industry is more sophisticated today than previously. That being said, it is still lagging behind more developed
countries. Processing trade remains important and China continues to rely on foreign-produced components in its manufacturing industries. The Shenzhen SEZ has a more advanced industrial structure than China and has developed into the high-tech hub of the country. China’s process of industrial upgrading does not strictly resemble either a CAF or a CAD strategy, and one can point to how elements of both have been present in its industrial development. The industrial development of the Shenzhen SEZ has been more in line with a CAF strategy, and its government has been less interventionist, with industrial upgrading guided by its comparative advantages to a bigger extent.

While a number of studies on the Chinese SEZs have been conducted, many of these are outdated and not very in-depth. As such, I believe my thesis presents new and valuable insight into how these zones contributed to China’s economic growth. I have not seen them linked to the debate on a CAD versus a CAF strategy anywhere else, and this makes it somewhat different from much other academic research. I have not had the time or space to conduct a more detailed study of the performance of the different SEZs. Both how the four initial zones have performed, and also how other types of zones later established have contributed to China’s economic growth, are interesting features in the Chinese economic growth process. A more detailed comparison of various SEZs and economic zones, and an analysis of global value chains and the role domestic versus imported content play in Chinese manufacturing and exports, is something that would be valuable additions to the existing academic work on the Chinese economy.

The most important thing is nonetheless that research on China continues in the future, as this will enable us to understand the important role it is currently playing, and will continue to play in the years to come.
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