



# **A Study on the Relationship between Institutions and Economic Growth**

-- The Case of Ningbo Hi-Tech Park--

**Kristianstad University**  
**The Department of Business Studies**  
**Master Dissertations**  
  
**Public Administration & International  
Business Programme**  
  
**June 2005**

**Tutors:**  
Joakim Ekstrand  
Annika Fjelkner  
  
**Authors:**  
Li Yongjian  
Yu Ning  
Ding Xiaofang

---

# Abstract

---

- Title:** A Study on the Relationship between Institutions and Economic Growth --*The Case of Ningbo Hi-Tech Park*--
- Authors:** Li Yongjian, Yu Ning, Ding Xiaofang
- Tutors:** Joakim Ekstrand and Annika Fjelkner
- Problem:** Ningbo Hi-tech Park has seen great economic growth after its establishment. The reasons behind the astonishing economic growth have seldom been investigated. Especially, no research has been done to explain the specific economic phenomena in the NHTP from the perspective of institutions.
- Purpose:** We aim to have more knowledge about the relationship between institutions and economic growth. Further the result of the dissertation will be presented to the Ningbo government and the NHTP administrative committee. The dissertation will also serve as an experimental test for further research.
- Methodology:** To answer the research questions we conducted two questionnaires, one in Ningbo Hi-Tech Park and one in Sweden. An interview with managers of the companies serves as a complement.
- Conclusions:** The results indicated that all the institutional changes in the NHTP are important to attract investment. The five most important institutions can be grouped into two categories. They are the visible profits including “the favorable tax policies and subsidies from the local government” on one hand, the efficiency of government including “the stability of regulations and policy, the simplified administrative procedure and the high quality service of servant” on the other hand. The favourable tax policies head the list of the five institutions. There are no significant differences among companies in different industries, different sizes and different types.
- Keywords:** Institutions, Economic Growth, Ningbo Hi-Tech Park

# **Foreword**

**Kristianstad, June 2005**

With this dissertation, we are going to graduate from Kristianstad University. During our study as international students, we have learned a lot and experienced a lot. Especially during the period of writing dissertation, we learned how to cooperate with each other and how to solve difficult problems.

We would like to express our sincere thanks to our tutor Joakim Ekstrand who encouraged and inspired us to complete the dissertation as beautiful as possible.

We appreciate Annika Fjelkner's efforts for the improvement of the language. We also owe the completion of the questionnaire to the friends in the NHTP who helped us to deliver and collect the questionnaire.

Finally, we want to thank our families and friends for their help and support.

**Li Yongjian**

**Yu Ning**

**Ding Xiaofang**

# Table of Contents

<b>Chapter 1: Introduction .....</b>	<b>1</b>
<b>1.1 Background .....</b>	<b>1</b>
<b>1.2 Problems and Research Questions .....</b>	<b>1</b>
<b>1.3 Purpose .....</b>	<b>3</b>
<b>1.4 Limitations.....</b>	<b>3</b>
<b>1.5 Outline .....</b>	<b>4</b>
<b>Chapter 2: Methodological Consideration .....</b>	<b>5</b>
<b>2.1 Methodological Strategy.....</b>	<b>5</b>
2.1.1 <i>Choice of Theories .....</i>	<i>5</i>
2.1.2 <i>Research Philosophy and Approach .....</i>	<i>5</i>
2.1.3 <i>Research Strategy .....</i>	<i>6</i>
<b>2.2 The Use of Data Sources.....</b>	<b>6</b>
2.2.1 <i>Secondary Data .....</i>	<i>6</i>
2.2.2 <i>Primary Data.....</i>	<i>7</i>
<b>2.3 Scientific Approach of Material Analysis .....</b>	<b>8</b>
<b>2.4 Validity and Reliability.....</b>	<b>8</b>
2.4.1 <i>Validity.....</i>	<i>8</i>
2.4.2 <i>Reliability.....</i>	<i>9</i>
<b>2.5 Generalisability .....</b>	<b>10</b>
<b>2.6 Summary .....</b>	<b>10</b>
<b>Chapter 3: Theoretical Framework .....</b>	<b>11</b>
<b>3.1 Overview of the New Institutional Economics Theory.....</b>	<b>11</b>
3.1.1 <i>Introduction .....</i>	<i>11</i>
3.1.2 <i>The Development of the NIE Theory.....</i>	<i>12</i>
3.1.3 <i>The Research Methodology of the NIE Theory.....</i>	<i>12</i>
<b>3.2 The Theory of the State .....</b>	<b>15</b>
3.2.1 <i>Introduction .....</i>	<i>15</i>
3.2.2 <i>The Nature and Role of State .....</i>	<i>15</i>
<b>3.3 The Theory of Institutional Change.....</b>	<b>16</b>
3.3.1 <i>Introduction .....</i>	<i>16</i>
3.3.2 <i>The Functions of Institution.....</i>	<i>17</i>
3.3.3 <i>The Way of Institutional Change.....</i>	<i>17</i>
3.3.4 <i>Types of Institutional Change .....</i>	<i>18</i>
<b>3.4 The Theory of the Property Rights .....</b>	<b>19</b>
3.4.1 <i>Introduction .....</i>	<i>19</i>
3.4.2 <i>The Concept of Property and Their Dimension .....</i>	<i>19</i>
3.4.3 <i>The Character of Property Rights.....</i>	<i>20</i>
3.4.4 <i>The Function of Property Rights.....</i>	<i>20</i>

3.4.5	<i>Specification of Property Rights</i> .....	21
3.4.6	<i>Property Rights Structure and Efficiency</i> .....	22
3.4.7	<i>Economic Growth and Property Rights</i> .....	24
<b>3.5</b>	<b>Transaction Costs Theory</b> .....	<b>25</b>
3.5.1	<i>Introduction</i> .....	25
3.5.2	<i>Definition of Transaction</i> .....	25
3.5.3	<i>Definition of Transaction Costs</i> .....	26
3.5.4	<i>The Two Important Assumptions of Transaction Costs Theory</i> .....	27
3.5.5	<i>The Determinants of Transaction Costs</i> .....	28
3.5.6	<i>Types of Transaction Costs</i> .....	30
3.5.7	<i>The Measurement of Transaction Costs</i> .....	31
<b>3.6</b>	<b>Porter’s Diamond Theory</b> .....	<b>32</b>
<b>3.7</b>	<b>The Solow Growth Model</b> .....	<b>33</b>
<b>3.8</b>	<b>Summary</b> .....	<b>34</b>
<b>Chapter 4:</b>	<b>Analysis of Establishment of the NHTP</b> .....	<b>35</b>
4.1	<b>Introduction</b> .....	<b>35</b>
4.2	<b>Background of Establishment of the NHTP</b> .....	<b>35</b>
4.3	<b>The Cause of Establishment of the NHTP</b> .....	<b>36</b>
4.4	<b>The Path of Establishment of the NHTP</b> .....	<b>39</b>
4.5	<b>The Economic Development of the NHTP</b> .....	<b>40</b>
4.6	<b>Summary</b> .....	<b>41</b>
<b>Chapter 5:</b>	<b>Analysis of Different Institutions</b> .....	<b>43</b>
5.1	<b>Brief Introduction to Ningbo City and the NHTP</b> .....	<b>43</b>
5.2	<b>The Different Institutions of the NHTP and Ningbo City</b> .....	<b>43</b>
5.3	<b>Summary</b> .....	<b>48</b>
<b>Chapter 6:</b>	<b>Empirical Method</b> .....	<b>50</b>
6.1	<b>Introduction</b> .....	<b>50</b>
6.2	<b>Sample</b> .....	<b>50</b>
6.3	<b>The Questionnaire</b> .....	<b>51</b>
6.4	<b>The Interview</b> .....	<b>52</b>
6.5	<b>Operationalisation</b> .....	<b>52</b>
6.5.1	<i>Questions about General Information</i> .....	52
6.5.2	<i>Questions about Different Institutions</i> .....	53
6.6	<b>Response rate</b> .....	<b>55</b>
6.7	<b>Summary</b> .....	<b>55</b>
<b>Chapter 7:</b>	<b>Analysis of the Survey</b> .....	<b>57</b>
7.1	<b>Introduction</b> .....	<b>57</b>
7.2	<b>General Analysis of the Importance of the 19 Institutional Changes</b> .....	<b>58</b>
7.3	<b>Analysis of the Most Important Institutions</b> .....	<b>60</b>
7.4	<b>Analysis of Data from Companies in Different Industries</b> .....	<b>62</b>

7.5 Analysis of Data from Companies in Different Sizes.....	65
7.6 Analysis of Data from Companies in Different Types .....	68
7.7 Other Important Institutions.....	71
7.8 Summary .....	71
<b>Chapter 8: Conclusion.....</b>	<b>73</b>
8.1 Conclusion of the Results .....	73
8.2 Practical Implication .....	75
8.3 Suggestions for the Government .....	75
8.4 Suggestions for Further Research .....	76
8.5 Summary of Dissertation .....	77
<b>Reference: .....</b>	<b>80</b>
<b>Appendix 1: .....</b>	<b>83</b>
<b>Appendix 2: .....</b>	<b>88</b>

## List of Tables and Figures

Figure 3.1: The situation that the specification of property rights happens .....	21
Figure 3.2: Porter's Diamond Model for the competitive advantage of nations.....	33
Figure 4.1: The circulation of institutional change .....	38
Figure 4.2: The Path of Establishment of Ningbo Hi-Tech Park .....	40
Figure 4.3: Per capita GDP growth rate of Ningbo City and the NHTP.....	41
Figure 4.4: GDP growth rate of Ningbo City and the NHTP .....	41
Table 4.1: The growth rate of different economic index of Ningbo City and the NHTP .....	41
Table 7.1: The mean value and standard deviation of 19 institutions from the questionnaire in the NHTP.....	59
Table 7.2: The rank of the five most important institutions from the questionnaire in the NHTP .....	61
Table 7.3: The mean value and standard deviation of 19 institutions in different industries from the questionnaire in the NHTP.....	64
Table 7.4: The mean value and standard deviation of 19 institutions in different size from the questionnaire in the NHTP .....	67
Table 7.5: The mean value and standard deviation of 19 institutions in different type from the questionnaire in the NHTP .....	69

# Chapter 1: Introduction

---

*This chapter presents the background of the dissertation. The research problems, research questions and the purpose of the dissertation are discussed. In addition, we analyze the limitations of the dissertation.*

---

## 1.1 Background

With the implementation of the reform and openness policy, China has been taking different measures to develop the national economy. Some special economic zones with new institutions and preference policies were established to attract investment so as to serve as a policy-test field and develop the local economy. The Ningbo Hi-Tech Park (NHTP), a kind of special economic zone, was jointly founded by the Chinese Academy of Sciences and the Municipal Government of Ningbo in 1999. According to statistical data from Ningbo government, GDP growth rate in the NHTP sees a bigger increase than that in Ningbo city (see Figure 4.3 and Figure 4.4). That is to say, the NHTP has been one of the most important driving forces attracting foreign direct investments and has a significant economic growth. However, the reasons behind the dramatic investment increase and economic growth are rarely investigated. The New Institutional Economics theory is a useful theoretical tool which develops that institutions function as either negative or positive factors to economic development. Therefore we suppose if institutional changes could be interpreted as reasons for economic changes in the NHTP. Consequently, we decided to conduct the research to find the answer.

## 1.2 Problems and Research Questions

When we intended to start research, we found that institutions may influence economic growth by giving incentives to many different factors, for example, institutions may encourage education, capital or investment. The statistical data in the NHTP gave us some indications. The data showed that the growth rate of



contractual and actual utilization of foreign capital as well as domestic capital in the NHTP is much higher than that in Ningbo city. In other words, there is a big improvement of investment and economic development compared with Ningbo city. It enables us to suppose that the increase of investment may be one of the most dominant forces of the economic growth in the NHTP. However, no empirical research has been conducted to find if the institutional changes attracted the investment. Therefore, we believed that it could be challenging but interesting to investigate if the institutional changes became incentives to investment increase in the NHTP and if so, which institutional change was the most important.

Hence, our dissertation will be deployed by answering the following research questions. Are institutional changes important to attract companies to invest in the NHTP? By this question, we want to know if the institutional changes happened in the NHTP are important factors, which contribute to increasing investment. If we are lucky to find that those institutional changes did play important roles in attracting investment to the NHTP, we suppose if it is possible to find which institutional change is the most important in attracting companies to the NHTP. Since companies in different industries, size and type may put emphasis on the various institutional changes, we want to answer the question---- Are there any differences among different industries, different types of companies and differently sized companies concerning the attitude to the importance of the different institutional changes?

Before answering the questions, some discussion will be made on how institutional changes became incentives to individuals and organizations according to the four sub theories under the New Institution Economics theory. We will also discuss why the NHTP was founded and what kinds of institutional changes have happened in the NHTP compared with Ningbo city.

### **1.3 Purpose**

As the NHTP was established to attract investment by implementing some institutional changes and improve the regional economic development subsequently, we are curious to know what kind of institutional changes have been applied in the NHTP and whether those institutional changes are important to attract investment to the area. Furthermore, we want to present the research results to Ningbo government and the NHTP administrative committee hoping that it will help them to pay more attention to the function of institutions and provide optimal institutions to serve the companies. Finally, the dissertation also serves as an experimental test so as to provide some basic clues for further research.

### **1.4 Limitations**

First, we limited our investigation and study to the NHTP which is a newly established area. Since it is the first time for us to make research in the specific area, we wanted to start from a small scale and the NHTP served as a test-field for further research. Another limitation is that we chose four theories of the New Institution Economics as our theoretical tool. Otherwise we may select other theories like Porter's Diamond Theory or others. In our ideas, the New Institutional Economics is an umbrella of theories and we have more options to find the most relevant one to guide our research. Furthermore, we thought that the New Institution Economics is a foundation theory explaining how institutional changes give individuals and organizations incentives to invest in the NHTP and ultimately improve economic growth. In addition, there might be many factors which may influence economic growth, for example, investment in human capital and education. However, we limited the questionnaire to the factor of investment instead of others. The reason is that we suppose the institutional changes in the NHTP are mostly aimed to increase investment from both domestic and foreign companies.

## **1.5 Outline**

The outline of the dissertation will be deployed as follows. Chapter 2 described the research method, approach and strategy. In chapter 3, the theoretical framework will be presented by illustrating a literature review on the New Institutional Economics theory. Further, we will enumerate the theory about how expanding investment will promote the economic growth. Subsequently, chapter 4 will try to explain the path of the establishment of the NHTP. Furthermore, chapter 5 will emphasize on the institutional changes happened in NHTP compared with Ningbo City and empirical methods will be illustrated in chapter 6. Chapter 7 will analyze the collected data from the questionnaires and interviews. In the last part of chapter 8, we will conclude with the conclusion and a summary of the dissertation and applicability of the research will be enclosed. Suggestions for future research and practical implications will also be discussed.

## **Chapter 2 Methodological Consideration**

---

*This chapter aims to provide a picture of methodological consideration of this dissertation, including the methodological strategy, data sources collection and scientific approach of data analysis. A discussion about validity, reliability and generalisability is also presented.*

---

### **2.1 Methodological Strategy**

#### **2.1.1 Choice of Theories**

As described in the introduction, our aim was to know what kind of institutional changes have been applied in the NHTP and whether those institutional changes are important to attract investment to the area which may speed economic growth. Therefore, we started by studying the establishment of the NHTP and institutional changes in this area compared with Ningbo City. Furthermore, we researched the New Institutional Economics theory as well as some theories which are concerned with economic growth. As we focused on how institutional changes influence the economic growth, we thought that the New Institution Economics is a foundation theory explaining how institutional changes give individuals and organizations incentives to invest in the NHTP and ultimately improve economic growth. In addition, we thought institutions significantly impact those factors such as technology and capital which are crucial to economic growth, we considered the NIE theory is the most suitable for our study. Other theories are too wide for us to carry out our research. Then we chose four theories of the NIE theory closely related to the research topic in the dissertation and made little discussion about other economic growth theories.

#### **2.1.2 Research Philosophy and Approach**

For this dissertation, deductive approach combined with positive philosophy is

dominantly used. By using the knowledge gained from the literature review, we discussed about why the NHTP was founded and what was the influence of institutional changes on attracting investors in the NHTP compared with Ningbo City. Then we proposed our research questions and answered them by conducting proper research strategy and analyzing the empirical data. We also provided some suggestions for the government to improve economic management.

### **2.1.3 Research Strategy**

There are six different research strategies including experiment, survey, case study, grounded theory, ethnography, action research (Mark Saunders, Philip Lewis and Adrian Thornhill, 2003, p92). We hold that a survey strategy that consisted of questionnaire and interview was the most appropriate strategy for our study. If we use case study as an alternative one, it requires us to investigate as many high-tech parks as possible so as to make our study reliable and meaningful. It is impossible because of the limited time and our limited accessibility to the relevant information in those Hi-Tech parks. Moreover, we wanted to start from a small area as a test for further research since few researches about the specific area have been done before. So the survey strategy, which usually associates with deductive approach, was employed. One of advantages of this strategy is that it is possible to collect a large amount of data from a considerable population (Saunders, Lewis and Thornhill, 2003, p93). We need such large information to test the result of theoretical analysis. Using a survey strategy also can give you more control over the research process. The result of the survey can be compared easily with each other (Saunders, Lewis and Thornhill, 2003, p93). Since we want to identify which institutional change is the most important to attract investment, this strategy is a favorable choice.

## **2.2 The Use of Data Sources**

### **2.2.1 Secondary Data**

We employed both primary data and secondary data in the dissertation. Secondary data consisted of a lot of public materials including the rules applied in the NHTP,

official statistics covering economic topics about the NHTP and Ningbo City, and survey-based data of the government department. The collected data from the government, which provided valuable background information on certain aspects, were extremely helpful for our study. These secondary data are reliable since they were derived from annual statistics report or documents of the government.

### **2.2.2 Primary Data**

In order to answer our research questions, primary data were collected by survey including questionnaire and in-depth interview.

#### **• Questionnaires**

We designed the questionnaire grounded on the pre-learning on the literatures. First, we surveyed some Swedish potential investors and subsequently the questionnaire was conducted in the NHTP.

Delivery and collected method was used when we sent the questionnaire to Swedish companies while postal questionnaire was carried out in the NHTP. We delivered the questionnaire to the participants directly and collected the questionnaire when they finished it in Sweden. Our colleagues sent the questionnaire to the companies in the NHTP directly.

Two types of the questions were designed to clarify the importance and the most important institution (See Appendix 1). The respondents were kindly required to answer the importance of each different institution, and they were asked to choose five most important institutions. In this way, the threat that respondents may select all institutions to be important was avoided.

#### **• Interviews**

In-depth interviews were employed to achieve more reliable results. Our colleagues and we interviewed some companies' managers who have conducted the investment to check whether the results from the questionnaire were reliable. Formal and structured interview with listed questions was conducted in the NHTP

while unstructured interview was executed in Sweden that interviewee can spoke freely around the related topic.

## **2.3 Scientific Approach of Material Analysis**

The deductive approach is usually attached with quantitative research method, but for this dissertation, we combined the quantitative method and the qualitative method to clarify the research objectives.

Using qualitative method in this dissertation has an explanatory and descriptive purpose. In our research, we analyzed the reasons why the NHTP was established with some institutional changes. The qualitative method intended to illustrate why the different institutions executed in the NHTP can promote investment. Qualitative analysis makes it possible for us to explain the relationship between institutions and economic growth, thus it contributes to answering research questions.

The aim of using quantitative method in this dissertation is to confirm the qualitative findings from the literature analysis. The research questions will be answered by a set of empirical research figures achieved from survey.

## **2.4 Validity and Reliability**

### **2.4.1 Validity**

High validity is necessary for a scientific research. We tried our best to formulate the questions in an explicit way to make sure that each respondent is clear about what they are required to answer. High validity is ensured in our research. Before we handed out the final questionnaire to the respondents in China, we conducted a pre-test among Swedish companies as potential investors. We also sent the questionnaire in Chinese version to some managers of those companies in the NHTP. From the pre-test, we modified the questionnaire according to their answers. For example, we found it was reluctant for the respondents to rank the ten most

important factors, so we reduced the rank number from ten to five. Furthermore, our research is to test if the institutional changes happened in the NHTP are important to attract investors to enter into the NHTP and to find out which is the most important institution. We formulated the questions according to the differences between the NHTP and Ningbo City. So, it enables us to say that we test what we mean to measure.

A threat to validity of our research is that whether the questionnaire will be answered by the exact person who knows the decision-making process of investing in the NHTP. Therefore, we tried to reduce the threat by delivering the questionnaire to those who once participated in making decisions or at least knew the exact factors in making decisions.

#### **2.4.2 Reliability**

One threat to the reliability of our research is the participant error. To avoid this error, we delivered the questionnaire in a “neutral” time and allowed the respondents to have enough time to fill out the questionnaire. In this way, they may carefully think of the really important factors influencing the original investment decision-making. In addition, we noted in questionnaire that the survey result is a way to influence the committee to improve economic management in the NHTP. Hence, it may lead the respondents to answer the questionnaire carefully. The other threat to the questionnaire is the participant bias. One possible participant bias for our questionnaire is that the respondents may not answer some questions objectively concerning the NHTP Administration Committee since the questionnaire was collected by the staffs working in the committee. We tried to ensure the anonymity of respondents to questionnaires so as to get the reliable data. However, this error is difficult for us to avoid completely.

Observer error is not likely in our research since we designed the standardized questionnaire in a clear description ensuring that every respondent can only



interpret it in one way. In order to avoid observe error, we interview some companies' managers to confirm the reliability of our results from questionnaire.

## **2.5 Generalisability**

The questionnaire conducted in Sweden indicated the potential foreign investors' opinions about the importance of the different institutions for their investment decision-making. To some extent, the result from the questionnaire was helpful to improve the generalisability. If the result from the questionnaire in Swedish companies conforms to that from the NHTP, it means our study can be generalized to certain extent. But the generalisability is still limited because of the small samples in Sweden. Furthermore, our dissertation only focused on the NHTP and the main survey was also conducted in the NHTP. If we can investigate more Hi-Tech parks in China, then we can generalize the result better. Because of the limited time and limited accessibility to material, we did not investigate other Hi-Tech parks in China. However, we have tried our best to expand scale of investigation by increasing the number of sample companies in the NHTP. This was beneficial to improve the possibility of generalizing the research result.

## **2.6 Summary**

Four theories closely related to the research topic were chosen. Deductive approach combined with positive philosophy was used in our dissertation. The major research strategy employed to collect primary data was survey including questionnaire and in-depth interview. Second-hand data was collected from public materials and government documents. Both quantitative method and qualitative method were used for material analysis. Several measures were adopted to achieve high validity and reliability. We took some measures to improve the generalisability.

## **Chapter 3: Theoretical Framework**

---

*In this chapter the theoretical framework is presented. We reviewed all the NIE theory briefly and presented four theories of the NIE theory in detail. Finally, Porter's Diamond theory is compared with the NIE theory and the Solow Growth Model is introduced shortly.*

---

### **3.1 Overview of the New Institutional Economics Theory**

#### **3.1.1 Introduction**

New Institutional Economics (NIE) Theory is a theoretical paradigm that “attempts to incorporate a theory of institutions into economic analysis” (Douglass C. North, 1992, p1) Now it is widely used in economic, political, and social analysis. The major research goals of NIE are to explain what the institutions are, how do they rise and change, how do they affect the economic, political and social life, and the like.

Various institutional economists have different definitions about institutions. In Veblen's view, “the concept of institutions is prevalent habits of thought with respect to particular relations and functions of the individual and society” (Jairo J. Parada, 2002, p47). John R. Commons proposed, “Institution is a collective action in control, liberation, and expansion of individual action.” (Jairo J. Parada, 2002, p47). The new institutional economist North stated that “institutions are the rules of the game of a society or more formally are the humanly devised constraints that shape human interaction”. They are composed of formal rules (status law, common law and regulations), informal constraints (conventions, norms of behavior, and self imposed codes of conduct) and the enforcement mechanism of both (North, 1990, p3). In this dissertation, institutions refer to the formal rules executed in the

NHTP because we want to investigate the relationship between investment decision-making and government's regulations and policies.

### **3.1.2 The Development of the NIE Theory**

The NIE theory started with an article "*The Nature of the Firm*" (1937) written by Ronald Coase (Ronald Coase, 1998, p72). In this article he first introduced transaction costs into economic analysis. With the works of Douglass C. North, Oliver Williamson and other economists, the NIE has influenced various areas such as politics, law and organizations since the 1970s. North was the first person who combined and integrated the theory of state with the theory of property rights (Geoffrey M. Hodgson, 2004, p5).

The NIE theory builds on the Old Institutional Economics theory that stresses that institutions are significant factors for economic growth (Geoffrey M. Hodgson, 2004, p6-9). At the same time it develops some new ideas grounded on the old institutional economics theory. New Institutional Economics stresses that institutions are endogenous crucial factors that provide incentive structure for economic growth. Institutions do matter since they reduce uncertainty, lower transaction costs, internalize externalities and produce collective benefits from cooperation (North, 1990, p3; Justin Yifu Lin, 1989, p4-p7).

### **3.1.3 The Research Methodology of the NIE Theory**

With regards to the analytical approach, the NIE theory has three important characteristics. First, it explains the economic activities based on the transaction costs approach. Coase, North and Williamson, all take the standpoint that individuals cannot rationally make best selection in the presence of transaction costs. They assert institutions are necessary "constraints" to reduce costs. Some economists have also introduced a game theoretic approach (Knight and Sened, 1995). Second, the NIE theory questions the full rationality assumption of neoclassical theory, stressing that human beings are bounded rationality instead of

full rationality to optimize decision due to the constraints of information and cognitive capability of individuals. Third, the NIE theory explains institutions in a way of individualism instead of holism. It regards the interaction of individuals as the ultimate elements in explaining the emergency and change of institutions (Geoffrey M. Hodgson, 2004, p5-6)(Daniel Ankarloo, 1999, p46)

#### **3.1.4 Main Research Fields**

Nowadays, NIE is a school of thought with various quite distinct subfields. According to the viewpoints of Eirik G. Furubotn and Rudolf Richter, it mainly includes transaction cost economics, property rights analysis, economic theory of contracts, the new institutional approach to economic history, the new institutional approach to political economics, and constitutional economics (Furubotn and Richter, 1998, p31-32).

**Transaction costs economics** is an important branch and the foundation of the NIE theory. Transaction costs economists assert, “Transaction costs greatly affected the ways in which economic activity is organized and carried out.” The theory is concerned with how these costs influence the formation and implementation of contract (Furubotn and Richter, 1998, p31).

**Property right analysis** explains that property rights arrangement determine the positions of individuals in an economic system, thus, affecting the incentive and behavior of people. Specification of property rights in a given economy is a key factor influencing economic outcome (Furubotn and Richter, 1998, p31).

**Economic theory of contracts** “deals with incentive and asymmetric information problems”. It consists of two branches called agency theory and relational and incomplete contract theory (Furubotn and Richter, 1998, p31-32). The theory is concerned with how to reduce the agent costs that arise from the separation of ownership and control issues.

**The new institutional approach to economic history** is used to analyze the historic experience in an economy with the application of transaction costs, property rights and contractual relationship. The theory attempts to prove that institutions are endogenous variables for a general economic model (Furubotn and Richter, 1998, p32).

**The new institutional approach to political economics** is a subfield of the NIE theory that was expanded into political science, and it is applied to interpret various political phenomena from the perspective of transaction costs. It includes several branches such as the theory of state, the theory of institutional changes and the theory of government organization (Furubotn and Richter, 1998, p32). The theory of state illustrates what is the role of state in economic area. It argues that the state possesses the relative advantage in supplying appropriate structure of property rights, providing law and order and realizing economic of scope. The theory of institutional change is a theoretical analytical framework explaining the nature of institutions, sources of the institutional change and the direction of the institutional change.

**Constitutional economics** According to Buchanan, is a field that “attempts to explain the working properties of alternative sets of legal-institutional-constitutional rules that constrain the choices in activities of political and economic agents” in Buchanan’s view. (Furubotn and Richter, 1998, p32) it is well known as “public choice” in particular.

In our dissertation, we will focus on the transaction costs theory, property rights analysis, the two branches of the new institutional approach to political economics that are the theory of state and the theory of institutional changes. Why do we use these theories instead of others? In our study, we aim to investigate the relationship between institutions and economic growth. From the perspective of firms, reductions in transactions costs and clear property rights may promote the

incentive to invest that will simulate economic growth. Thus transaction costs theory and property rights theory is useful to analyze how the institutions executed in the NHTP motivate investment. Since the NHTP is established with some institutional changes and government plays a key role in the process of changes, so the theory of state and the theory of institutional changes are applied to discuss this phenomenon.

## **3.2 The Theory of the State**

### **3.2.1 Introduction**

The theory of state is a subsystem of the new institutional approach to political economics. North and Eggertsson Thránn are the chief contributors to the theory of the state within the NIE theory. They regard the theory of state as essential with respect to the significant role of state in specifying property rights, providing the rule of games and realizing economics of scale in the use of violence.

### **3.2.2 The Nature and Role of State**

According to the model for the state that North proposed, “there is a wealth or utility maximize ruler by which the state trades service for revenues (taxes).” For the purpose of maximizing the income, the state, as a discriminating monopoly specifies the structure of property rights which is associated with the enforcement of contracts and transaction costs (Jairo J. Parada, 2002, p56). The state is an “economic” that organization pursues profitability maximum.

State as the supreme authority has many functions in society. A well functioning state is vital to economic activity. North defines the state as “an organization with comparative advantage in violence, extending over a geographic area” (Eggersston, 1990, p327). **First**, the state has the power to give orders, to make and administer law. It can provide the competitive and cooperative rules of the game with the aim to reduce transaction costs and maximize output. By using a violent state machine, state can provide more service at a comparatively low cost. **Second**, the state plays

a key role in realizing economies of scale that may help to reduce transaction costs for individuals. **Third**, the state endows the power to specify property rights. Based on North's work, Eggerston elaborates that the state tends to create a proper structure of property rights in order to lower the transaction costs and promote investor's incentive. Eggerston states that the structure production frontier depends on the structure of property rights while the latter depends on the political structure. The structure production frontier that is crucial to economic growth is determined by those political organizations that can provide efficient property rights. So, a favorable political system is helpful to produce incentives to economic growth because it can coin the fine property right structure, and a fine property right structure can improve the structure production frontier (Eggerston, 1990, p319).

### **3.3 The Theory of Institutional Change**

#### **3.3.1 Introduction**

The theory of institutional change is invoked to explain the creation of institutions and the way of institutional changes. There are three main explanations of institutional changes. One explanation is stated from the perspective of evolutionary emergence of social conventions. It interprets institutional rules, as social conventions are the consequences of continuous social interactions in which the actors can benefit from cooperating with each other (Jack Knight and Itai Sened, 1995, p102). The second explanation of institutional change emphasizes that institutions are the results of strategic conflict. The third point of view is that institutional changes are result of exchange and competitive selection (Knight and Sened, 1995, p101-110). North is a representative of those economists who hold the third standpoint and a pioneer in the research of institutional change within the NIE theory. He proposed that an alternative of institutional arrangement is a result of continuous interaction between institutions and organizations. The Chinese economist Justin Yifu Lin developed some of North's ideas.

### **3.3.2 The Functions of Institution**

In the book *Institutions, Institutional Change and Economic Performance*, North points out that “institutions provide the basic structure by which human beings have created order and attempted to reduce uncertainty in exchange. Together with the technology employed, they determined transaction and transformation costs and hence the profitability and feasibility engaging in economic activity” (North, 1990, p118). North’s point is that institutions are indispensable since they create the incentive structure for economic growth with respect to transaction costs. Without institutions in hand, transaction costs will rise due to uncertainty caused by the bounded rationality of human being and the complex environment. Limited rationalities of people lead to their limited ability to receive and capture information. Because of this uncertainty, people need to cooperate with each other to against risk better with institutions. (North, 1990, p24-25)

Institutions are means to achieve benefits of collective actions. (Justin Yifu Lin, 1989, p80) In the case absence of institutions, individuals tend to pursue their own interests. Institutions are created to monitor individual performances.

### **3.3.3 The Way of Institutional Change**

How does institution change? According to North, “It is the continuous interaction between institutions and organizations shapes the institutional change. Institutions are the rules of the game and organizations are the player” (North, edited by Knight and Sened, 1995, P15). Based on North’s propositions, it is the objects of organizations to pursue profitable opportunities lead to competition between different organizations that gradually drove the institutional evolution. When organizations recognized that a kind of skills and knowledge is a function of the incentive structure in the institutional matrix, they will invest in this kind of skills and knowledge. North claims, “The kind of skills and knowledge that individuals and their organizations acquired will shape evolving perceptions about opportunities to maximum pay-off, hence that will incrementally alter institutions”



(North, edited by Knight and Sened, 1995, p15). The change from existing institution to a new one only happen when the individuals and organizations perceived the gains from the change outweigh the costs of the change. Institutional change is a joint result of external change and internal learning. External change may make the existing institutions become obsolete, that is to say they are not the most efficient to maximizing profit. Internal learning may help individuals and organizations perceive a potential choice.

### **3.3.4 Types of Institutional Change**

North and Davis first proposed the concepts of the two types of institutional change in the book *Institutional Change and American Economic Growth*. Justin Yifu Lin has borrowed types of institutional change from North and Davis, and has developed them. He explains that induced institutional changes refer to those changes of existing institutions or the establishment of new institutions initiated and organized voluntarily by one or a group of people when they perceive profitable opportunities. Imposed institutional changes are introduced and executed by government through orders or laws (Justin Yifu Lin, 1989, p13).

Whereas Justin Yifu Lin argues that induced institutional change derives from an institutional disequilibrium, that is to say the current institution is no longer the most efficient one for lowering production and transaction costs. Several sources may lead to institutional disequilibrium. Changes in technology have an impact on the stability of institution, influencing both production and transaction costs. Since different institutions are relatively interdependent, changes in other institutional arrangement causes institutional disequilibrium. Moreover, long-run changes in factor such as land and labor, along with product prices can make institutions inefficiently. For the imposed institutional change, the state, represented by the government, is the most important factor. The government can take actions to rectify existing institutions (Justin Yifu Lin, 1989, p13-20).

## **3.4 The Theory of the Property Rights**

### **3.4.1 Introduction**

Property rights theory is a subfield of the NIE theory. John R. Commons was the first person to propose the concept of ownership. Frank H. Knight was the first economist who described the property function in the economy (York Brazil, 1986). The origin of property rights theory comes from Coase (1960), and was developed by Demsetz (1967), Furubotn/Pejovich (1974), and Alchain/Demsetz (1972).

### **3.4.2 The Concept of Property and Their Dimension**

The concept of property rights in the NIE theory is a broader concept compared to the legal concept. The legal ownership of asset is the best-known definition of property right that is recognized and enforced by the government. Armen A. Alchian (1967) defined property rights as the right to choose the user right of the goods through social enforcement. Harold Demsetz (1967) in an article, *“Toward a theory of property”*, writes “that property rights are an instrument of society and derive their significance from the fact that they help a man form those expectations which he can reasonably hold in his dealings others. These expectations find expression in the law, customs, and mores of a society” (Demsetz, 1967). And Steven Zhang also states that property rights are a bundle of rights including user rights, income right and transferring right. Furubotn/Pejovich writes that property rights do not refer to “relations between men and things but, rather, to be sanctioned behavioral relations among men that arise from the existence of things and pertain to their use” (Furubotn/Pejovich, 1972).

In general agreement, three categories of property right consist of asset property right: First, rights to use an asset—user right. It also excludes others from its use (James, 2005). Second, there are rights to earn the return from an asset and contract over the terms with other individuals. Third, rights to transfer permanently to another party ownership rights over an asset—that is, to alienate or sell asset (Eggertsson, 1990, p33-35; Furubotn/Richter, 1997, p6). There are also other ways

to express the concept of the property right in the economic field. One is a possession of residual rights—that is, the rights to make any decisions concerning the asset's use that are not explicitly controlled by law or assigned to another by contract, the other is rights to allocate residual returns (the amount that is left over after everyone else has been paid) (Paul/Robert, 1992). The economic analysis of ownership focuses on these two issues.

### **3.4.3 The Character of Property Rights**

- ***Partitioning of Property Rights***

Property rights to resources are often partitioned in different time and locations. It means different rights such as user rights, earning return right and transferring rights of one asset can belong to one or more people at the same time. In china, all land owned by the state and the other rights contracted to the farmer. The character of partition makes a same ownership to have different property rights structure. Assigning the different rights to those who can use them most efficiently can promote a more efficient use of property rights.

- ***Attenuation of Property***

The Attenuation of property rights means that the efficiency of property rights will decrease when limits are imposed on property rights by the state or others. Economists emphasize that the freedom of property rights have the highest efficiency (Eggertsson, 1990). But in the real world, most property rights are restricted by regulations. One property right's attenuation doesn't mean all property rights' attenuation. The efficiency of all property rights may expand because of limitation of part of property rights (Brazel, 1989).

### **3.4.4 The Function of Property Rights**

The main function of property rights is to maximize the asset profit. Demsetz says a primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities (Demsetz, 1967). According to the Coase

theorem, when transaction costs are zero, the allocation of resource will be efficient regardless of the initial assignment of property rights. Negotiations between the parties would lead those arrangements being made which would maximize wealth irrespective of the initial assignment of rights (Coase, 1991). But in the real world, specification of property rights is costly. Clear property rights can reduce the transaction cost, and the lower transaction cost can promote economic growth and motive people to try to maintain profit.

### 3.4.5 Specification of Property Rights

How to specify property rights is the most important issue in Property Right Theory. The specification of property right means the ownership of different rights is specified. According to Brazel's, it means specifying the possession of residual rights and allocation of residual returns (Brazel, 1989).

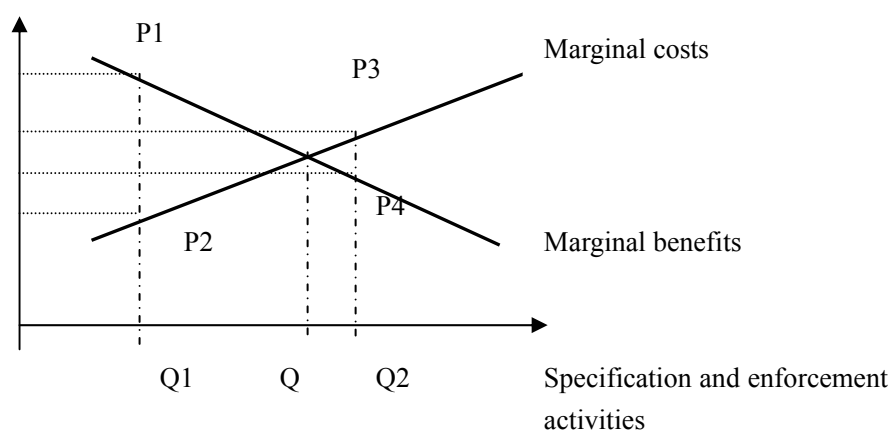


Figure 3.1: *the situation that the specification of property rights happen*

The specification of property rights will appear if the gains from the establishment of property rights exceed the costs of enforce the property right. From figure 3.1, at the point Q1, the marginal benefit (point p1) is larger than the marginal cost (point p2). So the specification of property rights will happen. At point Q2, the marginal benefit (point p4) is less than the marginal cost (point p3). So the specification of property rights will not happen. At point Q, the specification of property rights will not happen because the marginal benefit is equal with the marginal cost

(North/Thomas, 1973; Furubotn/Richter, 1997 p71). Nevertheless it is difficult to calculate the marginal benefit and cost.

According to Brazil's theory, most specifications of property rights are solved through private contract. The contract is the core of property rights and the specification of property is a contraction action (Cheung, Steven, 1970). Of course, the state can use national power such as the police or courts to assist individuals in enforcing legitimate contracts (North, 1981). Governments commit the protection and enforcement of property rights because they can do it at a lower cost than private volunteer groups. And governments also create new property rights where defined before and modify and transfer existing rights. (Paul/Robert, 1999, P303)

An efficient specification is the best way that is the simply and feasible arrangement and can maximize the total value received by people involved. Barzel said an optimal arrangement of property rights was that a party who is the major residual return maker should get the major part of the residual return. Because of the guarantee of the residual return, it can create incentive to the relative people to make productive activities to increase the value of the assets (Barzel, 1989). The optimal arrangement of property rights also is appropriate with experience in reality. In traditional industry, the owner of the capital has more power in producing incomes, so they share the big part of the residual return. But in the high technology industry, specialists and engineers play more important roles in producing the residual return, so they have bigger proportions of residual return.

### **3.4.6 Property Rights Structure and Efficiency**

- ***The Types of Property Rights***

There are five different types of property rights ownership. **(a)** Common property right. It means open access. All the people can use this property and share benefit of the property. **(b)** Communal ownership, whereby a community controls access a resource by excluding outsiders and regulating its use by insiders (Eggertsson,

1990, P37). **(c)** State property rights, it is an important class of property rights or the widely varying regimes. Property rights are specified by statute and rules within government. But this concept is particularly ambiguous. Some state property rights may be similar with common property. **(d)** Private property right, it is an exclusive right of the particular owner, and it is also emphasis that it is not an unrestricted right (Daniel, 1999). **(e)** Mixed property rights. This means the state-ownership, private-ownership or the communal-ownership exist and share part of property rights at the same time (Pejovich, 1995). Different property rights affect transaction costs and economic growth or stagnation (Eggertsson, 1990, P37).

#### ● ***Private Property Rights and the Optimal Property Rights***

There is an argument that the common property rights, state property rights, communal rights are inefficient, although the kind of these property rights is clear in the nominal ownership, the true ownership is not clear. The cost of monitoring and implementing property rights will be high, it become inefficient (Ankarloo, 1999).

When the cost of enforcing and monitoring the private property rights is higher than the cost of enforcing and monitoring state or community property right, the state or community property rights will replace private property right (North/Thmos, 1973).

Most scholar emphasize that private property is the most efficient property rights. Adam Smith in the book "*the nature of national wealth*" emphasized the importance of private property rights. The private property right can promote economic growth (Smith, 1976). The incentive effects of private property rights

will generate to the efficient and no wasteful use of scarce resource(Furubotn/Richter, 1997, p71).

The same ownership of property right still exist the optimal structure of property rights. Although Coase emphasizes the private property is efficient and no matter what the structure of property, different structure leads different efficiency (Grossman/Hart, 1986). For example, renting housing and owning housing are the same private property rights, but efficiency of maintaining house is different. Normally, the owning house has higher efficient than renting the house in maintaining house. So the optimal structure is the most efficient property structure (Yangxiaokai, 2005). Coase write that the market will lead the structure of property right to the optimal situation by the invisible hand (Grossman/Hart, 1986).

### **3.4.7 Economic Growth and Property Rights**

Many scholars emphasize the importance of property rights in economic growth. Coase in the book *“the rise of the western world”* stated the reason of west country is the appearance of private property rights. Economic growth result from “evolution of a body of property rights which promoted institutional arrangement, leading a fee-simple absolute ownership in land...and a host of institutional arrangements to reduce market imperfections in product and capital markets” (North/Thomas, 1973, p17). Actually, the subtle changes in property structure can change the performance of economics. Economic incentives are affected by the property right structure and behavior change correspondingly.

The appropriated property rights can motivate all the people to preserve and enhance the asset and pursuit the maximum residual benefits. It can increase the number of transactions. Transactions are less costly and risky. More opportunities for long-term contracting appear. If there is strong system of property rights, more capitals are avail. Solow economic growth model states that more capital will lead economic growth (Stephen D, Williamson, 2005, P198). It is never overstated that the ownership of property rights is the most effective ways to motivate people to create, maintain, and improve assets for the increase of asset value.

## **3.5 Transaction Costs Theory**

### **3.5.1 Introduction**

“Transaction cost economics is an interdisciplinary undertaking that joins economics with aspects of organization theory and overlaps extensively with contract law” (Williamson, 1979, 261). Transaction cost economics has drawn broad interest among economists and has been widely applied in explaining economic phenomena in real world. The development of the transaction cost economics can be traced back to Ronald.H.Coase who mentioned the definition of the transaction cost in his *The Nature of the Firm (1937)*. In the ensuing years, Olive E. Williamson and Steven, Cheung contributed a lot to the further development of the transaction cost economics.

### **3.5.2 Definition of Transaction**

The concept of transaction that was first proposed by John R. Commons is the basic unit of analysis and is “the alienation and acquisition between individuals of the rights of future ownership of physical things” (Commons, 1934, P58). Williamson describes the transaction as “the micro-analytic unit of analysis” and he argues that a transaction occurs when goods or service is transferred across a technologically separable interface (Williamson, 1985, P1). The underlying interpretation is that transaction happens as long as there is exchange among different parties.

As to the types of transaction, Eirik G. Furubotn and Rudolf Richter classified the transaction as intra-firm transactions and market transactions. Commons hold that transaction can be grouped into three types, that is, market transaction that reflects the relationship between firms in the market, managerial transaction that occurs within firm and political transaction that happened between government and individuals.

Based on the explanation above, we conclude that transactions are ubiquity and can be understood as an exchange of resources between different entities in the society.



If production deals with interaction between people and materials, transaction deals with relationship among people.

### **3.5.3 Definition of Transaction Costs**

With the concept of transaction as given above, it is understandable that transaction costs are just the costs of activity “transaction” (Eirik G. Furubotn, p43). It is widely accepted that it is Coase who first discovered the transaction cost in the article of *the nature of the firm* in 1937. In attempt to answer, “Why a firm emerges in a specialized exchange economy”, he explained, “The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism” (Coase, 1937). Since then, the cost of using the price mechanism is labeled as the definition of transaction costs given by Coase. Douglas. W. Allen (1999, p894) wrote that Coase’s failure to describe the definition precisely leaves the issue open for further explanation for the later researchers.

“In general terms, transaction costs are the costs that arise when individuals exchange ownership rights to economic assets and enforce their exclusive rights.” (Therainn, Eggertsson, 1990). “The fundamental idea of transaction costs is that they consist of the cost of arranging a contract ex ante and monitoring and enforcing it ex post, as opposed to production costs, which are the costs of executing a contract.”(Matthews, 1986) “Transaction costs are the costs of running the economic system.”(Arrow, 1969, p48) “Transaction costs may also include the costs arising from finding someone with whom to do business, of reaching an agreement about the price and other aspects of the exchange, and of ensuring that the terms of the agreement are fulfilled.”(Michael Parkin, 1990)

Eirik G. Furubotn and Rudolf Richter (1997) regard the transaction costs as the costs of resources utilized for the creation, maintenance, use, and change of institutions and organizations. They include the costs of defining and measuring resources or claims, the costs of utilizing and enforcing the rights specified, and the

costs of information, negotiation, and enforcement. Steven. Cheung has made many contributions to explaining transaction costs by generalizing Coase's original argument (Douglass W. Allen, 1999, p896). He observed that besides production cost other costs like the cost of bargaining contract, enforcing and monitoring contracts also existed in reality (Steven N.S Cheung, 1983).

With so many descriptions of transaction costs, it seems that there is no theoretical consensus on the standard definition. In our dissertation, transaction cost is narrowly defined as the cost of operating business in a certain institutional and economical environment. In particular, the transaction cost for the companies in the NHTP includes mainly the cost of starting business, running business.

#### **3.5.4 The Two Important Assumptions of Transaction Costs Theory**

When refer to the reasons for transaction costs, two key assumptions of human behavior in transaction cost analysis bears being mentioned. That is, bounded rationality (Simon, 1947) and opportunism (Williamson, 1975; 1985).

Bounded rationality is the assumption that decision makers have constraints on their cognitive capabilities and limits on their rationality. Although decision makers often intend to act rationally, this intention may be circumscribed by their limited information processing and communication ability (Simon 1957). From the perspective of transaction cost theory, these constraints may increase the transaction cost, e.g. collecting and searching information, negotiating cost. It also implies that human actors as well as firms are incapable of perfect contracting. Opportunism is a variety of self-interest seeking but extends simple self-interest seeking to include self-interest seeking with guile (Williamson, 1979, 234). In other words, given the opportunity, the decision makers may unscrupulously seek to serve their own interests by lying, cheating as well as deceit, such as violating agreements. It is difficult to know a priori who is trustworthy and who is not (Barney, 1990).

In general, due to the existence of bounded rationality and opportunism, people need to find more to safeguard their interests by stipulating more details in contracts or transactions. Those detailed stipulation, explanation lead to costs apart from production costs.

### **3.5.5 The Determinants of Transaction Costs**

The cost of transaction depended on the nature of different transactions. According to Williamson, there are three dimensions concerning transactions. "...The three critical dimensions for characterizing transactions are (1) uncertainty, (2) the frequency with which transactions recur, and (3) the degree to which durable transaction-specific investments are incurred, of these three, uncertainty is widely conceded to be a critical attribute; and that frequency matters is at least plausible. The governance ramifications of neither, however, have been fully developed — nor can they be until joined with the third critical dimension: transaction-specific investments"(Williamson, 1979,239).

*Assets specificity* Williamson wrote in *The Mechanisms of Governance* that asset specificity has reference to the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive value (Williamson, 1979, P59). Six kinds of specific assets were made: (1) site specificity, as where successive stations are located in a cheek-ty-jowl relation to each other so as to economize on inventory and transportation expenses; (2) physical asset specificity, such as specialized dies that are required to produce a component; (3) human asset specificity that arises in a learning-by-doing fashion; (4) dedicated assets, which are discrete investments in general purpose plant that are made at the behest of a particular customer; to which (5) brand name capital and (6) temporal specificity have been added. Transactions that require specific assets may add the risk of opportunistic behavior from both parties and increase the cost of negotiating and signing contract. Put it in another way, the more specific assets involved in transactions, the bigger the transaction costs are.

***Transaction frequency*** In John Robert's idea, some transactions are one-time affairs and others are repeated frequently, involving some of the same parties under more or less similar conditions over a long period of time. In general, the frequent transaction or transaction in a long run can reduce the transaction costs. When the transaction frequently occurs among the same parties, the interdependence of each party was increased and thus the opportunistic behavior will be reduced. As such, in a long-term relationship, trust and faith is easier to be built among transaction parties and the disputes can be solved properly without any formal mechanism of coordination. The cost of avoiding opportunistic behavior and using a coordination mechanism can be saved considerably.

***Uncertainty and complexity*** Uncertainty can be divided into two types, behavior uncertainty and environmental uncertainty. Environmental uncertainty resulted from the unforeseeable contingency of transaction in the future. This kind of uncertainty will increase the costs of negotiation, communication and coordination. Behavior uncertainty arises from the unpredictability of the behavior of the other parties. Before the signing of the agreement, the cost of searching what the parties' true position or intention will be dominant. While after signing, in case of the other parties' shirking from obligations, the cost of enforcing and monitoring the parties to be consistent with what were written contracts will arise too. The complexity of the transaction also increase the

Besides the three dimensions, two additional ones were added by Paul Milgrom and John Roberts in delineating transactions.

***Difficulty of measuring performance*** By difficulty of measuring, the author means that some performances of parties in some kinds of transactions are hard or costly to be measured exactly. If so, "people commonly arrange their affairs to make measurement easier or to reduce the importance of accurate measurements." Accordingly, if people want to economize transaction costs, it might be feasible to make the performance more clearly measured.

*Connectedness to other transactions* Transactions differ in terms of dependence. Some are greatly independent and involves few people, and others are much more connected with the other transactions. In the case of tight connections, more coordination is required to keep the specific transaction going. More coordination may imply more meetings, and more time and more money are required, which resulted in the cost of coordination.

### **3.5.6 Types of Transaction Costs**

Not many literatures mentioned explicitly the types of transaction costs, nevertheless, some mentioned the types of transaction costs.

Eirik G.Furubotn and Rudolf Richter proposed two variants for transaction costs in an anagogic way of production costs. First is “fixed” transaction costs. This kind of transaction refers to the costs that occur in setting an arrangement. Second is so called “variable” transaction costs, which is variable with the increase or decrease of the volume or number of transaction.

The second school can be cited as follows. Paul Milgrom and John Roberts simply owe the emergence of transaction costs to the necessity to coordination and motivation. Consequently, two broad categories can be assumed as coordination costs and motivation costs. As far as coordination costs are concerned, coordination in market and hierarchies are treated separately. While coordination in market is costly, the costs of coordination through hierarchies—firms, government, and organizations—should be considered significantly. Such kind of costs include the costs of collecting and transmitting information from low level to high level, the costs of communicating among different parties, the time costs of waiting for decisions and also the costs of mal adaptation. Motivation costs, the author argues, may arise from informational incompleteness and asymmetries as well as imperfect commitment.

Based on the literature above, in our analysis, we would like to point out the types

of transaction costs from the perspective of running a company in certain institutional settings.

*Searching information costs* may rank first. As to searching information costs, it arises from the incomplete knowledge of the transaction parties as government, public agency. For investors, searching the information about institutional settings for operating and running business in the area is also necessary while costly.

*Coordination costs* are significant in running business in a certain area. Coordination costs follow the dividing line of Paul Milgrom and John Roberts, including the coordination costs from markets and hierarchies (government and public agent) Negotiating and communicating costs are significant parts of coordination.

*Enforcement costs* are costs of inability of implementing the reached agreements in the course of operating business, including the costs of setting disputes.

### **3.5.7 The Measurement of Transaction Costs**

If the identify of transaction costs is inspiring, the more important task is the measurement of transaction cost. Only by investigating the relative costs of transactions in different institutional settings can we conclude that the cost-economizing institution or arrangement is more favorable than its counterpart. Though the measurement of transaction cost is important from the perspective of empirical research, it is demanding to measure transaction costs directly. The measurement of transaction costs is another big research branch of transaction cost theory and many researchers have contributed to it. Apparently, it is not the task that our present dissertation and cover completely. Based on the empirical work of some researchers, we propose some simple indicators to identify the relative amount of transaction costs. First, the factor of time is negatively related to the transaction costs. Put it in another way, the more time involved in one transaction, the more costs are regarded. Second, the factor of procedure has the same impact

on transaction costs. The long and complex procedure is considered as increasing transaction costs and vice versa. Third, the official restraints or requirements for companies also increase the cost of conducting transactions.

### **3.6 Porter's Diamond Theory**

Porter's Diamond theory (see figure 3.1) mentions how to attract foreign investment and cultivate competitive advantage. Four factors determine the competitive advantage of an area. They are (a) factor conditions that is production factors, like skilled labor, infrastructure, etc., which are relevant for competition in particular industries (including human resources, material resources, knowledge resources, capital resources, and infrastructure), (b) home demand conditions that is home demand for products and services produced, (c) related and supporting industries that is the existence or non-existence of internationally competitive supplying industries and supporting industries, (d) firm strategy, structure, and rivalry that is how companies are established, are organized and are managed, and that determine the characteristics of domestic competition.

In the Porter's Diamond Model, Porter stated the government plays an important role. The model argues that "Government's proper role is as a catalyst and challenger; it is to encourage - or even push - companies to raise their aspirations and move to higher levels of competitive performance ..." (Michael E. Porter, 1990) Governments can influence all four of Porter's factors through a variety of actions such as subsidies to firms, either directly (money) or indirectly (through infrastructure), tax codes applicable to corporation, business or property ownership, educational policies that affect the skill level of workers (<http://pacific.commerce.ubc.ca/ruckman/competitiveadvofnations.htm>, 2005-5-20). All the factors that will determine the competitive advantage of an area as Porter proposed are closely related to institutions. To some extent, good institutions will improve competitive advantage of an area by influencing firm strategy, factor conditions and so on. So we thought institutions are vital to improve the effect of

those factors, which may influence economic growth. In the dissertation we will focus on the NIE theory instead of Porter’s Diamond theory since many of the conditions in Porter’s theory is also used in the NIE theory, in fact the differences between the NHTP and Ningbo City is institutional differences, the other differences there could be from Porter’s theory isn’t that big.

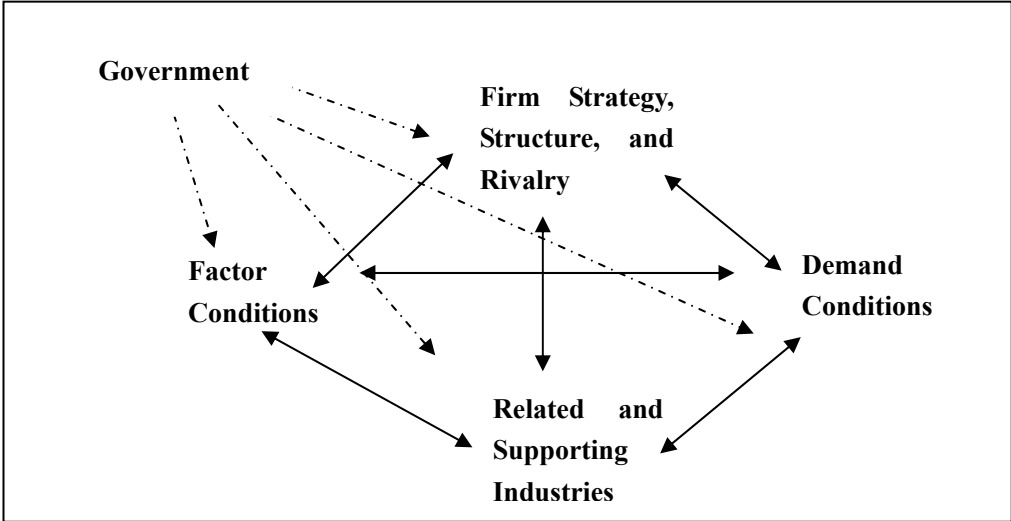


Figure 3.2: Porter’s Diamond Model for the competitive advantage of nations

### 3.7 The Solow Growth Model

Economic growth means, “An increase in real income, measures as the year-to year percentage change in real GNP or real GDP” (William J.Boyes, 1992, P334). Three main factors are influencing economic growth. They are the growth of total productivity, the growth of the capital stock and the growth of the labor force. The Solow growth model makes sharp predictions concerning the sources of economic growth. A production function where Y is current output, Z is current total factor productivity, K is the current capital stock, and N is the current labor is used.

$$Y=Z*F(K, N)$$

There is a positive correlation between GDP per worker and the ratio of investment to GDP according to the Solow growth model. The growth rate of labor force is negatively correlated with output per worker (Williamson, 2005, P198). So investment increase will lead to GDP growth. Well-educated labor and clear



property right will improve total factor productivity, and it will promote economic growth.

### **3.8 Summary**

The theory of institutional change is invoked to explain the creation of institutions and the way of institutional change. Institutions are important because they reduce uncertainty with respect to transaction costs reduction, and they also influence economic activity. Induced and imposed institutional change is the two main ways to explain the reason behind institutional change.

The property rights including user right, earning return right and transferring right will be specified when the benefit of specification is larger than cost of specification. Different property rights affect the transaction cost and economic growth. The principal specification is that a party who the major residual income-maker should get the major part of the residual return. The clear specification of property rights motivate people to pursue the maximum residual return that lead to more capital avail. According to Solow economic growth model, more capital will promote economic growth

The transaction costs are the cost of an exchange of resources between different entities in the society. The two key assumptions--bounded rationality and opportunism contribute to explaining the rise of transaction costs. Five dimensions of transactions are illustrated. That is, assets specification, transaction frequency, uncertainty and complexity, difficulty of measuring performance and connectedness to other transactions. They have negative or positive impacts on the number of transaction costs.

Porter's diamond focus on the four factors that sharp the advantage of an area and government play an important to strengthen these factors through different actions that are institutions. The theory also emphasizes the institution. So we will use the NIE theory instead of other theories.

## **Chapter 4: Analysis of Establishment of the NHTP**

---

*Why the NHTP was founded and what is the path of the establishment of NHTP is presented in this chapter. The influence of the establishment in terms of economic growth is discussed.*

---

### **4.1 Introduction**

To understand the reason and the path of establishment of the NHTP will be helpful for us to understand the new institutions executed in the NHTP and forecast what kind of other new institutions will appear in the future. The establishment of the NHTP accompanying with the applications of some new institutions is important institutional changes. In this chapter we will discuss why and how the NHTP established based on the theory of state and the theory of institutional change. A model will be formed to explain this phenomenon.

### **4.2 Background of Establishment of the NHTP**

With the purpose to stimulate the economic growth, China has taken different measures to develop national economy. China reformed the old domestic institutional structure such as the collective farming system, Resource Allocation Mechanism, interest-rate policy and the commodity price policy. As an important reform, Special Economic Zones (SEZS) were modeled and endowed with new institutions such as favorable policies. These special zones achieved enormous successes in attracting foreign and domestic investment and in generating economic growth. Such institutional innovation was proved to be effective in practice. So the central government of China gradually endowed several other regions with the similar institutions. More other special regions, for example, Economic and Technologic Development Zones and High Technology Development Zones were established (James Gerber, 2005). Ningbo Hi-Tech Park

(NHTP) that was jointly founded by the Chinese Academy of Sciences and Ningbo Municipality in 1999 is one of such special zone.

### **4.3 The Cause of Establishment of the NHTP**

Institutional disequilibrium will emerge with economic growth. Some of the disequilibrium can be removed by the induced innovation that conducted by one or a group of individuals. It also can be removed by imposed innovation implemented by governments when governments perceive future benefits outweigh the expected costs. (Justin Yifu Lin, 1989, P24)

Economy will grow if the existing institutions are efficient (North, 1973, P2). When economy developed to some extent, some institutions may not harmonize with further development that will lead to the produce of institutional disequilibrium. In our study, institutional disequilibrium means the traditional administrative management system and economic policy in normal districts cannot compliant with the economic development to some extent. We found the NHTP was established in the context of institutional disequilibrium caused by economic growth. It was a result of continuous interaction between institutions and organizations. In the process of pursuing profitable opportunities, the governments made laws and regulations and the organizations took part in the institutional changes. Thus the NHTP was established with some new institutions (see Figure 4.1).

Institutional disequilibrium affected the economic growth in general and the development of high technology industry in particular. The traditional institutions were no longer most effective as there were some defections. **First**, structure imbalance was one problem caused by the traditional institutional framework. Traditionally, government gives priority to develop labor-intensive industries. In Ningbo, the Mechanical industry, textile & Garment industry and Plastic processing industry is strong, however, high technology and information industry was weak before establishment of the NHTP. With the global economic

development, technology and information become crucial factors that determine the economic growth or stagnation. Hence, to develop high technology industry was urgent for Chinese government including Ningbo municipality. But it is difficult for such industry development under the traditional administrative system. For example, high quality infrastructure that is important for high technology industry development is scarce in normal districts. **Second**, investors had to suffer time-consuming administrative procedures owing to complicated bureaucracies. **Third**, information asymmetry increased information searching cost. Relevant unfavorable information communication mechanism under tradition institutional framework is not good for further economic development. For example, because of competition deriving from the technology changes, enterprise hoped to seek key know-how that was abundantly possessed by research organizations for sustaining development. On the other hand, research organizations in China need to cooperate with enterprise to solve research funds scarce and to apply research achievement. Unfortunately, they can not communicate well due to information asymmetry. **Fourth**, it was difficult to realize the economic of scale for the high technology industry. There were few blueprints to develop high technology industry in large scope in Ningbo before establishment of the NHTP.

Then, organizations including governments, social organization such as enterprises and research organizations incrementally altered the institutional structure in the course of pursuing profitable opportunity. The perceived reward to them was the motivation to establish the NHTP. **On one hand**, enterprises and research organizations and other social organizations perceived they could reward from the new institutional framework and maximum profits. Since the NHTP was planed to provide a medium for better information communication. Searching for information costs will be lower. By developing the related industries within the special zones, the transaction costs of the enterprises declined. So these organizations exerted themselves to push the institutional change. **On the other hand**, the new rules will be set up by the political entrepreneur if they believe that

the potential benefit is greater than the costs to them (Eisenstadt 1965, 1968 from Yifu Lin, P21). Through establishing the NHTP, the government perceived the potential profit might increase in the process of high technology development.

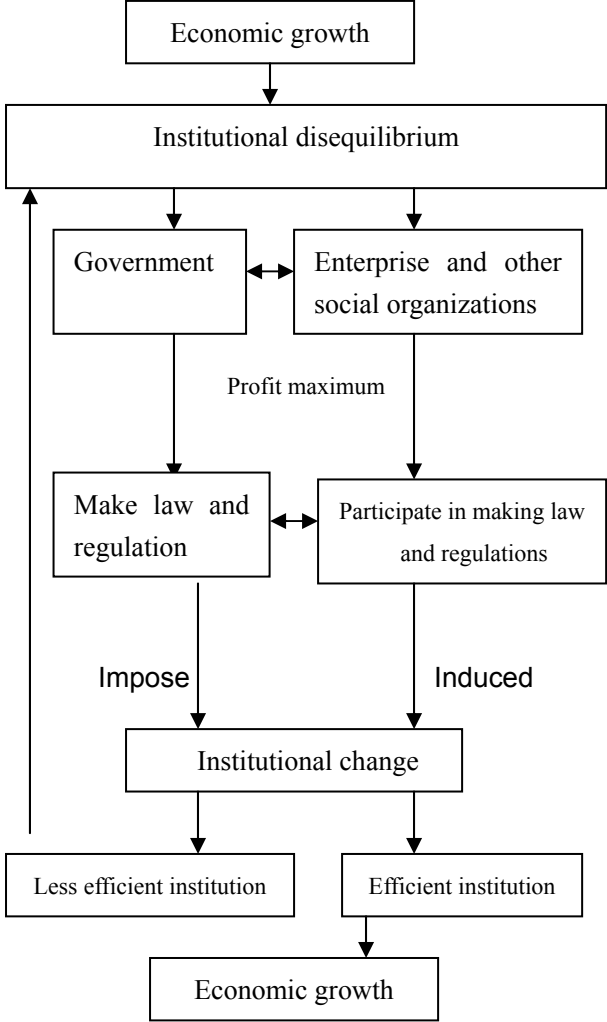


Figure 4.1: *the circulation of institutional change*

The industry structure will become more reasonable with the advanced high technology industry. Together with the improvement in administrative management, higher production efficiency and management efficiency might be attained which will boost economic growth and increase incomes of state. So central government, provincial government and Ningbo Municipality set down the regulation about industry policy in the NHTP, stressing the NHTP should engage

in developing electronics, microelectronics, software, new material and so on. The government also focuses on fostering industry cluster in order to realize economic of scale. New regulations to define the property rights such as lands and to create highly efficient administrative system were also stimulated by the governments.

#### **4.4 The Path of Establishment of the NHTP**

The establishment of the NHTP is a mixture of imposed and induced institutional changes. It was induced by enterprises, research organization and other social organization and imposed by the governments.

The governments at different levels play different role in the process of institutional changes. Nowadays many institutional changes like establishment of the NHTP first emerged in the local government, after new institutions were proved to be efficient, central government will admit later. The path of the establishment of NHTP can be shown like this: it was first established by Ningbo Municipality. When the first group of Hi-Technology Industry Zone was approved by the State Department of China in 1992, Ningbo Hi-Tech Park was not among them. Several years later, Ningbo municipality realized that it was important to establish this area and it financed the founding of the NHTP without enjoying the policy authorized by the central government. The NHTP developed very quickly and it was approved to be a Hi-Tech park of province level in 2000. In 2003, it applied to be a Hi-Teck Park at national level. (See Figure 4.2)

This is a new way of institutional change which can be regarded as a development in practice based on the arguments of the NIE economists. Some scholars call it a model of middle expanding (Yang ruihong, 2004). Such way of institutional change has its advantage and disadvantage. Institutional change in this path let the local government and social organization have more choice to choose new and efficient institutions, then test it in particular local area so as to reduce the risk to enforce a new policy. However, it may create opportunity for local government to carry out

policy that not accord with central government exactly. Confliction between governments of different level will rise some times. The game between local government and central government significantly impact the institutional change.

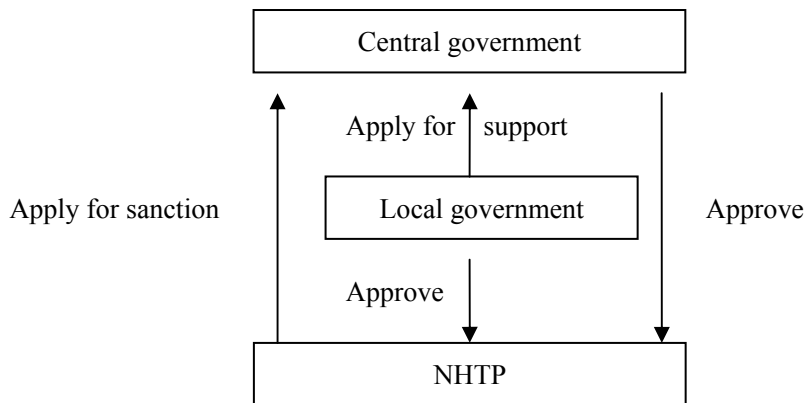


Figure 4.2: *The Path of Establishment of Ningbo Hi-Tech Park*

#### **4.5 The Economic Development of the NHTP**

The establishment of the NHTP is proved to be positive to economic growth from comparison of some economic statistical data of the NHTP and Ningbo City. More investment capitals flow in will create better environment for economic growth. From Table 4.1, we can see the growth rate of the contractual utilization (this concept means companies promise to invest in the future three years) and actual utilization of foreign capital (this means the capital has invested including machine, capital, intangible property and so on) of the NHTP is higher than those of Ningbo City. Table 4.1 also indicates that the growth rate of investment of fixed assets, the revenue income and increase of industry in the NHTP is more favorable than those in the whole Ningbo city. Figure 4.3 and 4.4 show GDP and per capita real GDP grew quicker in the NHTP than that in Ningbo City. Hi-Tech Industry dramatically developed in the NHTP compared with Ningbo City. So we draw a conclusion that the institutional changes are efficient in promoting economic growth.

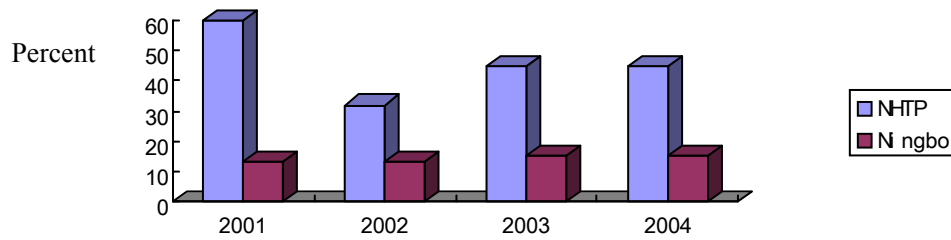


Figure 4.3: *Per capita GDP growth rate of Ningbo City and the NHTP*

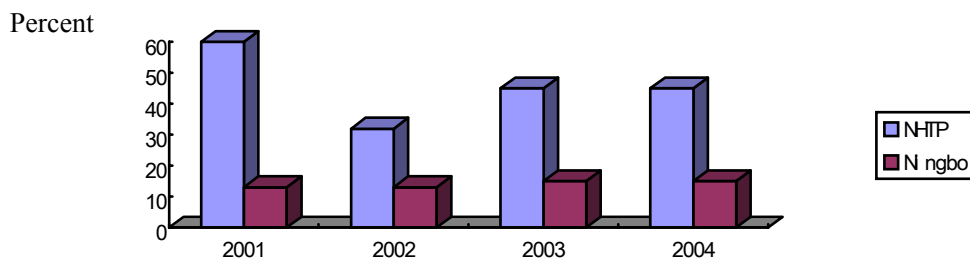


Figure 4.4: *GDP growth rate of Ningbo City and the NHTP*

Years		2000	2001	2002	2003	2004
<b>Fiscal revenue</b>	NHTP				216M	88%
	Ningbo	37.6%	32.9%	26.9%	25.9%	19.1%
<b>Actual utilization of foreign capital</b>	NHTP	22%	51%	46%	108%	61%
	Ningbo	20%	41%	43%	56.6%	21.8%
<b>Increase of the industry</b>	NHTP		36%	67%	69%	38%
	Ningbo	34.4%	15.1%	19.4%	28.1%	16.6%
<b>Investment of fixed assets</b>	NHTP	50%	51%	24%	56%	32%
	Ningbo	13%	30.4%	27.9%	39.3%	31.1%
<b>Contractual utilization of foreign capital</b>	NHTP		167%	18%	24%	28%
	Ningbo	45%	19.5%	64%	18.9%	20.1%
<b>Actual utilization of Domestic capital</b>	NHTP		41%	83%	311%	26%
	Ningbo		30%	30%	46%	23%

Table 4.1: *The growth rate of different economic index of Ningbo City and the NHTP*

## 4.6 Summary

Grounded on the above analysis, we draw a conclusion that it was the deflections of the traditional institutions made the organizations look for an advanced



institutional arrangement for more profitable opportunity. The shape of the NHTP was a result of interaction between the institutions and organizations. At the beginning, it is economic growth caused the external changes in technology and microeconomic environment and made the organizations being inconsistent with the current institutions and turn to find a new one. The attempt to maximize profit of the organizations induced the institutional change. Government as the supreme authority in providing the regulation and laws finally formulated the rules to establish the NHTP and set the operating rules with respect to the specific administration system and some particular economic policies. The path of establishment of the NHTP was a middle expanding way which was a mixture of induced and imposed institutional change.

## Chapter 5: Analysis of Different Institutions

---

*In this chapter the different institutions of Ningbo City and the NHTP are presented. According to theories, the positive or negative influences of different institutions in investment to enter the NHTP are discussed.*

---

### 5.1 Brief Introduction to Ningbo City and the NHTP

The city of Ningbo covers an area of 9365 sq. km and has a population of 5.96 million. Ningbo is an open coastal city of China. It is also a city with provincial level power in economic administration and local policy making. Ningbo is a model city in environmental protection and public security management; a main MP & Logistics center and export-oriented trade processing zone. It is honored as one of the best cities for investment.

The Ningbo Hi-Tech Park (NHTP) was jointly founded by the Chinese Academy of Sciences and the Municipal Government of Ningbo in 1999. The Park is located in the east of Ningbo City with an area of 18.9 square kilometers. The NHTP focuses on the development of electronics, microelectronics, photo-electronics, telecommunication, software and photoelectric-mechanical integration, new material and bio-medicinal industries. The Park is an IT production base under the state Torch Plan, a technical state level innovation and the first hi-tech park in the Zhejiang Province. The Park has attracted more than 1000 companies from different countries and regions such as Taiwan, Hong Kong, the USA, Netherlands, Singapore, France, Germany, and Spain and so on.

### 5.2 The Different Institutions of the NHTP and Ningbo City

#### ● *Different land policy*

Property rights are always embedded in the institutional structure of a society. In

the NHTP, the property rights of land are divided into different parts such as ownership right and using right. Land in the NHTP is state-owned. The government gives using rights to investors through a contract, and transfer using right should be authorized by the government, and the investor should use the land to develop high technology. But in rest of Ningbo City, there is no constraint of using right. The constraint of using right can reduce uncertainty of using land and reduce transaction cost.

### ● ***The different physical environment***

The physical environment in the NHTP is better than that of the rest of Ningbo City. The administrative committee of the NHTP invests a lot of money to beautify the environment. In other places, the government does not invest a lot of money in the environment. There are more open access parks owned by the administrative committee because of high cost of specifying property rights to private property right. In other places, it is companies themselves who responsible for beautifying physical environment, which will increase investment costs of companies.

### ● ***Intellectual rights protection***

According to the principle of specifying property rights, optimal arrangement of property rights belongs to the party who is the major residual-maker and should get the major part of the residual return. The protection of intellectual property rights in the NHTP is more efficient compared with other areas. The ratio of intellectual property rights of register capital can be beyond 30% of the total register capital. In other areas, it should be below 30%. This policy expands residual incomes of those people who is the major residual-maker. This can motivate those people to maintain and increase the value of property rights. Higher ratio of intellectual property rights of the register capital should have positive influence on investment decision making to enter the NHTP.

### ● ***Agency***

According to the transaction costs theory, information cost is a big part of whole transaction costs. So, enough information related to the Hi-Tech industry for

enterprises is helpful to reduce transaction costs. In order to promote communication between companies and administration committee, and provide abundant information to companies, many exchange centers such as engineer exchange center, venture capital investment center and property right exchange center are established in the NHTP. These centers don't exist in the rest of Ningbo City. The centers benefit companies to recruit staffs and get useful information. On contrast, for those enterprises outside the Hi-Tech Park, it is always costly to search information and policy related to a specific industry.

### ● ***The personnel service and policy***

Specific human capital causes the unique agency problems. Enterprises use the different form or informal contracts to reduce transaction costs of human resource management (Eggertsson, 1991, P177). In Hi-Tech industry, human resources play a very important role. To find and employ well-educated engineer and manager are concerned by companies. In the NHTP, Zhejiang scientific and Technical Talent Market (recruitment service) is established to provide a lot of related information so as to save time and cost of companies. The special policy and talent market can help enterprises to employ suitable employees. Different personnel rules and different salary system were carried out in the NHTP to motive employees. Well-educated and skilled persons are employed by the Administrative Committee with relatively high salary. If they cannot do job well, they will have to resign. But in the Municipal government of Ningbo City, the staffs are public servants, they would not be laid off unless they make big mistake. This will reduce the efficiency of work.

### ● ***The simplified administration arrangement***

The newly organized administrative committee is simplified with the concept of compressing management level and simplifying administrative procedure. As a matter of fact, there are only 10 departments in the NHTP to dealing with all administrative affairs, while there are more than 50 departments of Municipal government of Ningbo City. From the perspective of the transaction costs theory,

the reduced bureaucratic hierarchies help to reduce transaction costs of enterprises interacting with the committee and hence attract foreign and domestic investments in Hi-Tech Park.

### ● ***Favorable service***

Some friendly service is provided for companies in the NHTP. For example, one-stop service - fast approval, attentive investment consultancy, periodic visits by bureaucrats and minimum administrative fees is available to enterprise. Those arrangements reduce the frictions between the government and the companies. Comparatively, the complicated and time-consuming administrative procedures that investors have to go through in other areas are costly. According to some statistics, there are often as many as 20-30 offices that one has to go through before production actually takes place in the old administration. More important, the NHTP is empowered to examine and approve foreign investment projects that total investment is over 30 millions dollar independently so long as the foreign investment meets the state industry policies. And in other area such foreign investment projects should be approved by the central government. With transparent approval procedures, enterprises can deal with administrative procedures to establish a company in the NHTP within 3 working days, while in normal district it will take at least 7 working days to get approval. All these services can save time and improve efficiency. According to the transaction costs theory, reducing time can save transaction costs.

### ● ***The fiscal policy (subsidy)***

Fiscal policy is pivotal for the NHTP to implement other institutional innovation, for example, to carry out policies which can encourage investment and support sustaining economic growth. The fiscal policy includes tax policy, which we will mention later, and the government financial transfer system. In the NHTP, all the revenue except the part of handed to the central government would be used in this area. It does not share with the municipal government. But the Municipal government of Ningbo City has to share revenues with provincial government. It

means the NHTP administrative committee has more money than other places. Some of the money will subsidy to the enterprises to develop high technology or extend the manufacture scale. This will benefit companies.

### ● ***Preferential treatment in taxes***

There are some favorable tax policies for the companies. For example, it is stipulated that any entity or individual shall be exempt from business tax on income from technology transfer, technological development and related technological consultation and technical services. Those favorable tax policy is absent in the other area and the lower tax can reduce transaction costs significantly. Increasing the residual return can be incentive to pursue more profits. The favorable tax policies also enlarge the companies' residual income. According to the property right theory, it could be incentive to the company to preserve and enhance the value of the asset because they can enjoy the benefits of their efforts.

### ● ***Customs preferential policy***

The NHTP boasts a highly efficient logistic green lane and independent customs management. With the implementation of the air-land transshipment model, the custom clearance and freight time can be shortened to 5 hours and thus reduce companies' logistic cost. The NHTP customs established a green lane directly connected to Shanghai's port-of-entry and an Import and Export distribution center with completed functions of an inland port. This function brings about one-stop service for declaration, inspection and dispatch, and offers flexibility in the arrival, declaration, inspection and clearance of goods. But in the normal area, it takes longer time to complete all the procedures of customs. Pursuant to the elaboration in the transaction costs theory, the less time and procedure included, the more transaction costs will be reduced.

### ● ***The well-build infrastructure system***

Perfect infrastructure is vital to facilitate further development of enterprises. In the NHTP, well-developed infrastructure is available for all the enterprises. The completely build-up area has met the "Nine Utilities & Land-filling" standard .The

normal districts cannot offer such infrastructure because every kilometer square should invest 150 million RMB. Most time it only can offer green land to investors. Economies of large-scale operation in infrastructure can reduce investment cost of companies, which will benefit investors.

#### ● ***The venture investment agency and incubation center***

It is attractive to reduce uncertainty in running Hi-Tech enterprise. According to Williamson, higher uncertainty is, higher the transaction cost may exist. The set up of the technology development fund, venture capital, financial fund for overseas students and entrepreneurial fund etc. make it possible to offer HR and information services, comprehensive services including financing and management consultancy. These measures encourage companies to develop Hi-Tech industry by lowering business risk at the start-up period and lowering uncertainty.

#### ● ***The different character of bureaucracy***

The Administrative Committee of Ningbo Hi-Tech Park is a representative agency of Municipal government of Ningbo City. It is a temporary institution while municipal government is a permanent institution. According to the NIE theory, the temporary institution may raise uncertainty, which will influence companies' decision to invest in the NHTP. The Administrative Committee is not stable has negative influence.

### **5.3 Summary**

According to the theory, transaction costs include the cost of searching information, bargaining and signing contract, measuring and enforcing contract. Therefore, any arrangements that help to reduce transaction costs will be an impetus for companies to enter the NHTP. So the institutional changes like the exchange center, the different administration arrangement, preferential treatment in taxes, the well-build infrastructure system, the low threshold for register, the venture investment agency and incubation center are all conducive to attract investors. Clearly defined property rights will motivate companies to pursue maximum profit

and innovation. The high quality physical environment, partition of land property rights and the higher ratio of intelligence in register capital can attract more companies to invest in the NHTP.

But the NIE theory does not show which institutional change is the most important in making investment decision. The further research is to test whether institutional changes are important to attract investment and uncover which institutional change is the most important.



## Chapter 6: Empirical Method

---

*In this chapter the empirical method is presented. The sample selection and the survey including questionnaire and interview are explained. Response rate and analysis of the material are also presented.*

---

### 6.1 Introduction

This chapter describes the empirical method used in this dissertation. To start with, we introduced how we selected the sample. Then we accounted for the questionnaire and the interview. Operationalisation was considered as well as the response rate. The method of analyzing the collected data was presented finally.

### 6.2 Sample

We assumed that companies in different industries, in different size and different type may have different opinion about the importance of institutions. So it is better to use a non-probability sampling method. We chose different companies in the NHTP as the objects of the questionnaire and interview. To find these companies, a register list of all the companies provided by the Investment Cooperation Bureau of the NHTP was used. Some Swedish companies were selected in the meeting called China Business Opportunity organized by Kristianstad Union and Asianlink Consultant Company. These companies also have distinct background with respect to their products and service.

In total, 103 companies in the NHTP and 26 companies in Sweden participated in our questionnaire. We interviewed 20 companies in the NHTP and 10 Swedish businessmen.

### **6.3 The Questionnaire**

Our questions consisted of two main parts in the questionnaire sent to the NHTP. They are the general information about the companies and the importance of different institutions (see Appendix 1). The general questions were contracted as category questions, which mean that the respondents only fit to one category. In the second part, most questions, from question 1 to question 19 were closed questions consisting of seven alternatives in rate scale. Respondents had to choose one alternative from seven according to their opinion. Finally, we also developed one open question for the participant to answer freely which factors are important for investors that we did not mentioned in the questionnaire.

We handed out questionnaire (Appendix 2) to the Swedish companies in the meeting named China Business Opportunity and collected them after the meeting. We also left our e-mail to the Swedish businessmen and some of them sent the response of the questionnaire to us by email after the meeting. Our colleagues sent the questionnaire to the companies in the NHTP directly, the companies responded by post or fax.

It is crucial whether the responses are the proper people. Normally, there is an investment department or investment group to make investigation before an investment decision is made. They will make a report for the directorate board to make decision. So our survey focused on the directorate board, general manager and director of investment department, the questionnaire sent to them because they really know the vital factor of investment decision making.

Since we investigated companies in Sweden and China, the questionnaires were written in English and in Chinese respectively. We translated Appendix 1 into Chinese when we investigate the companies in the NHTP.

## **6.4 The Interview**

We investigated 10 businessmen when we attended China Business Opportunity meeting. We proposed the topic we wanted to explore and the interviewees had the opportunity to talk freely about their opinion related to the topic. Relevant information about our research was discussed with them. They told us their impression of the business environment in China and the most important institution for them to make an investment decision. Our colleagues working in the NHTP surveyed some companies face to face and made an investigation report for us according to the questionnaire. We also have telephoned some companies' managers in the NHTP to get deeper information in order to check if the findings obtained from the questionnaire were reliable.

## **6.5 Operationalisation**

The operationalisation of the questions in Appendix 1 was discussed below as well as the questions in Appendix 2.

### **6.5.1 Questions about General Information**

Five questions of the general information were interested in knowing the background of the companies and the person we surveyed. The first four questions tended to investigate which kind dose the company belongs to, concerning the size, the industry, and the type in terms of capital resource. These questions were used to test whether different kind of companies concern different institutions when they make investment decision. We assumed that different companies may have distinct attitude to the various institutions such as tax policy, land policy, custom service and the like.

Question 5 was applied to test whether the right person answered the question, as mentioned above, only owners or boards of the companies can decide investment decision and know well about the institutions carried out in the NHTP.

### **6.5.2 Questions about Different Institutions**

We aimed to test whether the institutional changes are important to attract investors and which institutional change is the most important in this part.

First, we evaluated 19 items separately. Question 1 to 4 in this part was concerned with the administrative management. Question 1 was asked to find out if the simplified administrative procedure is important to investors. Theory argues that the simpler procedure, the lower cost for the business. Question 2 was important to know whether the high quality service provided by the government official will affect investment decision. Different personal policy was implemented in the NHTP, which we think will improve the officials' working efficiency and provide good service to investors. Question 3 and 4 made it possible to find out if the stability of policy and Administrative Committee are important. According to the theory, stable policy and organization will reduce risks in business and lower costs, and this is crucial to business. However, the Administrative Committee is a temporal institution as we have discussed in chapter 5, it may be negative to attract investor.

Question 5-9 was related to the particular service provided by the NHTP. In line with the transaction costs theory, searching for information is one kind of transaction cost, the company can get the information conveniently means they can reduce transaction costs. This may stimulate their interesting in investment. Question 5, question 7 and question 9 are created respectively to ask the importance of financial and accounting information, investment and technology information and talent information service. We also drew a conclusion from theoretic review that less time consuming means less cost, question 6 was to measure whether convenient customs service available can save time and promote investment. The incubation development center which is a special organization is built to reduce risk of running new Hi-Tech industry, question 8 attended to

evaluate if this institutional change is essential to investors.

Since the incentive policies may help to attract investors with regard to minimize costs, we listed all particular incentive policies executed in the NHTP and asked the participants to answer whether they are important for investment. Question 10 to 13 were formulated concerning the importance of the tax policy, government subsidies, land price and autonomy right of import and export. Question 14 and 15 were formulated concerning threshold of capital register and intangible ratio in registering capital. According to the property rights theory, the two policies improved the ration of intangible property in registering capital which can expand the right of sharing residual return of those people who can help company to improve residual income.

Question 16 was concerned with the business surrounding. Well-building infrastructure is vital to facilitate further development of enterprises as it may be helpful to reduce operation costs of business. Question 17 is concerned with the importance of centralizing of industry. Because the NHTP focuses on developing high technology industry, if more and more such Hi-Tech enterprises are centralized in the NHTP and industry cluster shaped, it can be helpful to reduce costs of companies.

Question 18 tested whether good living environment is essential for investment. In line with the transaction costs theory, creating good living environment may be positive to attract investors.

Question 19 was to evaluate whether public ownership of property rights will benefit investment. The property rights theory interprets that public ownership of property rights can improve the value of the property rights when cost of specifying private property rights is high. Thus public ownership of property rights will make for attracting investors.

Then in the following part, we list all the 19 institutions and asked participants to select which five institutions that they find the most important. By comparing all the institutions together, the most important one may be found. Furthermore, it is beneficial to improve the precision of the result from evaluating each item separately.

Finally, we designed an open question for the participant, asking them to add institution they think important but we did not mention in our questionnaire. According to the theoretical analysis, the current institutions may induce new institutions in future and this question helps to investigate the phenomenon.

## **6.6 Response rate**

The questionnaire was designed with limited questions in order to achieve high response rate. Moreover, an envelope with stamp and an address was sent along with the questionnaire as to make the participants easier and cheaper to answer. From 60 persons 26 persons were willing to participate in our research when we surveyed the Swedish companies, 20 people did not answer the questionnaire for several reasons. Some people can not understand our questionnaire for their poor English and other people are not familiar with the topic since they are not businessmen. 14 persons didn't respond. The final response rate is 43.3 percent for the survey in Sweden. We sent the questionnaire to 123 different companies in the NHTP, 103 companies gave response to us and all of these questionnaires were valid. The response rate turned out to be 83.7 percent.

## **6.7 Summary**

The sample was selected with purpose. The questionnaire was sent to Swedish companies as a pre-test. Then we modified some questions and sent the questionnaire to 123 companies in the NHTP. We interviewed some Swedish businessmen and some managers of the NHTP's companies. The operationalisation of the questionnaire is made through five questions concerning the general

information of the companies and the participants, it also made through 19 questions with respect to the importance of different institutions. We also asked the participants to select 5 most important institutions and add institutions that are important for investment decision-making in their opinion. Each institution was analyzed separately and comparatively.

## Chapter 7: Analysis of the Survey

---

*In this chapter, we aim to answer the research question by analyzing the data from the questionnaire and interview. The survey conclusion is presented.*

---

### 7.1 Introduction

The survey is to reveal the influence of the 19 institutions in the decision making of companies entering into the NHTP. The respondents were asked to rate the extent of the 19 institutions by assigning a value from 1(not important at all) to 7(very important) to a variety of attitudes. We used SPSS to analysis the collected data. Mean value and standard deviations were established to investigate the result of each question.

Analysis will be made in the following way. Firstly, we will try to find out if the 19 listed institutional changes are important in attracting investments to the NHTP. Secondly, we intended to identify which institution is the most important in attracting investments. Thirdly, we supposed that companies in different industries, different size and different type may pay attention to various factors, hence, the attitude of different companies in terms of industry, size and type to the 19 institutional changes will be observed respectively.

To simplify the description of the table, we made some simple symbols for all the listed institutional changes.

Item1: the simplified administrative procedure

Item 2: the high quality service from government servants

Item 3: the stability of regulations and policy

Item 4: the stability of administrative committee



- Item 5: the investment service center
- Item 6: the convenient customs service
- Item 7: the institution of investment and technology consultancy
- Item 8: the incubation development center
- Item 9: the exchange center
- Item 10: the favorable tax policies
- Item 11: the subsidies from the local government
- Item 12: the low price of land
- Item 13: the autonomy of import and export
- Item 14: the minimum amount of register capital
- Item 15: the high ratio of intangible property in register capital
- Item 16: the perfect infrastructure and convenient transportation
- Item 17: the relating Hi-Tech industry
- Item 18: a good living environment
- Item 19: a good physical environment

## **7.2 General Analysis of the Importance of the 19 Institutional Changes**

Generally, the result of our survey in the NHTP showed that all the 19 chosen institutional changes were regarded important by the 103 companies (the result from the questionnaire of the 103 general managers, vice general manager and director of boards) when they decided to enter into the NHTP since the mean value of each item is over the middle value of 4. Under the umbrella of importance, however, the extent varies with each institution.

The mean value of 6.67 indicates the favorable tax policy is a very important factor and the deviation of 0.821 shows that there is a high degree of similarities among the respondents concerning the attitude to the importance. According to respondents, the high quality service from government servants with a mean value

of 6.55, the simplified administrative procedure with a mean value of 6.53, the stability of regulations and policy with a mean value of 6.44 and the local government subsidies with a mean value of 6.35 are the other four important institutions in decision making for companies. It is interesting to find that the top four institutions are also the four with the lowest standard deviation, meaning that there are not a wide spread between respondents concerning the importance of the four institutions. It bears being mentioned that the institution of “the minimum amount of register capital for a new company” has a minimum mean value of 4.88 with a high standard deviation of 1.464. The result means that most respondent companies do not regard the factor as very important one and there are significantly different attitudes toward the importance of the institution. (Table 7.1)

Table7.1 : *The mean value and standard deviation of 19 institutions from the questionnaire in the NHTP*

	Minimum	Maximum	Mean	Std. Deviation
ITEM10	3	7	6.67	.821
ITEM2	4	7	6.55	.825
ITEM1	3	7	6.53	.861
ITEM3	4	7	6.44	.813
ITEM11	3	7	6.35	1.082
ITEM16	1	7	6.16	1.109
ITEM12	1	7	6.11	1.350
ITEM19	1	7	6.00	1.155
ITEM5	3	7	5.99	1.089
ITEM4	1	7	5.78	1.267
ITEM18	1	7	5.78	1.196
ITEM6	1	7	5.66	1.492
ITEM7	2	7	5.64	1.267
ITEM17	1	7	5.53	1.399
ITEM8	1	7	5.47	1.487
ITEM13	1	7	5.39	1.470
ITEM9	1	7	5.38	1.380
ITEM15	1	7	5.22	1.267
ITEM14	1	7	4.88	1.464
N=103				

Since there is a possibility that the questionnaire may not give clear interpretation to the respondents, to increase the reliability and validity of the finding, we also conducted interviews with 20 companies in the NHTP by asking the importance of the 19 institutional changes. We believed that the interview will have more advantages than questionnaire to make what we want to ask clear to the respondents. The outcome of the interview illustrated that all the listed institutions are important when they want to invest in the NHTP. This conclusion is compatible with that from the questionnaire in the NHTP, which increased the reliability of the result from questionnaire.

In addition, in order to test if the finding will be similar when the respondents are the potential investors in Sweden, we conducted another questionnaire in 26 Swedish companies. It is interesting to find that Swedish companies also think all the institutions are important since the mean value for each institution exceeds 4. Though the number of the companies is not big enough to enable us to make certain that the finding from the questionnaire in the NHTP is also applicable in Sweden, anyway, we may say that there are some indications for the generalisability of our finding in Sweden.

### **7.3 Analysis of the Most Important Institutions**

As stated above, all the examined institutional changes in the NHTP are important in attracting investors. Now we will try to identify which one is the most important by asking the respondent companies to rank the five most important institutions among all.

We used the weight way to calculate the rank of the institutions. Rank of No. 1 got 5 score, No.2 got 4 score, No.3 got 3 score, No.4 got 2 score and No.5 got 1 score. All the other items not being ranked in the five most important institutions got zero score. The item getting the highest score will be regarded as the most important institution. The result was showed in Table 7.2.

From the table, we can see that “the favorable tax policies” is the most important institution regardless of industry, size and type of companies. The score of the institution is far beyond that of the second item in the table. It shows that all companies have similar opinions about the importance of the favorable tax policies. Furthermore, the following four important institutions are the stability of regulations and policy, the simplified administrative procedure, the high quality service and subsidies from the local government. Apparently, compared with the rank in the Table 7.1, the result of Table 7.2 shows the minor differences. The main differences are about the position of item 2 and item 3 in the list. However, we do not think there are significant differences about the result in the two tables since the mean value of item 2 and item 3 is similar. Anyway, the first five important institutions are the same in both two investigations. It is interesting to observe that those five top important institutions can be grouped into two broad categories, that is, the visible profits including “the favorable tax policy, subsidies from the local government” on one hand, the efficiency of government including “the stability of regulations and policy, the simplified administrative procedure, the high quality service of servant” on the other hand.

Table 7.2 : *The rank of the five most important institutions from the questionnaire in the NHTP*

Rank	Item		Score
1	Item 10	The favorable tax policies	319
2	Item 3	The stability of regulations and policy	197
3	Item 1	The simplified administrative procedure	186
4	Item 2	The high quality service	140
5	Item 11	Subsidies from the local government	135

**Number of participants=103**

Knowing the most important institution from the questionnaire in the NHTP, we

also used interviews to affirm the reliability of the result. With the response from 20 different companies about the 19 institutions, we found that the outcome is similar. They gave the most important institution to the favorable tax policies and attributed the following important institutions to the stability of regulations and policy, the simplified administrative procedure, the high quality service and subsidies from the local government. To some extent, it enables us to believe the result of the most important institution is reliable. Nevertheless, when we asked Swedish companies about the most important institution by questionnaire, the stability of regulations and policy ranked first, which is different from the result of the questionnaire in the NHTP. The reason behind the difference might be that Swedish companies know little about China which is far from the territory of Sweden. As a foreigner, they may be not sure about China's political policy and fear that a political instability may lead to a great loss for their investment in the NHTP. Irrespective of the difference about the most important institution, the favorable tax policies, the subsidies, the simplified administrative procedure also fall within the five most important institutions. Therefore, we may say that the result from Swedish companies almost goes well with that from the NHTP.

#### **7.4 Analysis of Data from Companies in Different Industries**

Now we move to find if there are any differences between different industries concerning the importance of the 19 institutions. We divided all the respondent companies into four industries, that is, 17 companies in software, 47 companies in manufacturing, 9 companies in service and 30 companies belong to others.

When different industries are looked into, it is clear that all the institutions are considered to be important since all the mean values are over 4. In spite of homogenous attitude to the importance of the 19 institutions, they are not of equal importance to different industries.

For the industry of software, the highest mean value of 6.71 is referred to "the

favorable tax policies” and the subsequently important institutions are “the perfect infrastructure and convenient transportation” with a mean value of 6.59, “the simplified administrative procedure”, “the stability of regulations and policy” and “the local government subsidiaries” with the same mean value of 6.53. “The autonomy of import and export” has the lowest value of 5.06 with the standard deviation of 1.749. It seems that the software companies regarded the institution as the least important one and there is a wide spread of answers from 1 to 7 among the respondents. The reason can be that there are few opportunities for software companies to export or import their products. So, it is understandable that the priority to import and export is neglected at all.

As to the industry of manufacturing, “the favorable tax policies” and “the simplified administrative procedure” with the same mean value of 6.64 ranked first. “The high quality service from government servants” with a mean value of 6.57 was listed in the second place and “the local government subsidies” and “the stability of regulations and policy” were followed subsequently. From the perspective of manufacturing companies, “the minimum amount of register capital” and “the exchange center” has the lowest mean value and a high standard deviation. It indicates that the two institutions are not as important as the other ones to manufacturing companies, but the attitude to the question among the respondents varies greatly.

When it comes to the industry of service, it is apparent that “the high quality service from government servants” and “the favorable tax policies” have the highest mean value of 6.33 and the same standard deviation of 1. “The simplified administrative procedure” and “the stability of regulations and policies” with the same mean value of 6.22 were in the second group. Obviously, as far as the service industry is concerned, the two institutions of “the minimum amount of the register capital” and “the high ratio of intangible property in register capital” were almost neglected among all the 19 institutions. The result is due to the nature of the

service companies since service companies are not required to register with a high amount of capital and intangible property are not as closely related to service industry as that to other industries.

Table 7.3 : *The mean value and standard deviation of 19 institutions in different industries from the questionnaire in the NHTP*

	Software		Manufacturing		Service		Others	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
ITEM1	6.53	1.007	6.64	.735	6.22	1.202	6.47	.860
ITEM2	6.41	.939	6.57	.827	6.33	1.000	6.67	.711
ITEM3	6.53	.624	6.51	.655	6.22	1.093	6.33	1.028
ITEM4	6.06	1.298	5.94	1.325	5.56	1.130	5.43	1.165
ITEM5	6.24	.903	6.15	1.042	5.33	1.118	5.80	1.186
ITEM6	5.76	1.091	5.96	1.398	5.11	1.616	5.30	1.725
ITEM7	6.06	.966	5.57	1.379	5.56	1.236	5.53	1.252
ITEM8	6.41	.939	5.60	1.513	5.11	.782	4.83	1.577
ITEM9	5.71	1.213	5.32	1.746	5.33	.866	5.30	.877
ITEM10	6.71	.985	6.64	.895	6.33	1.000	6.80	.484
ITEM11	6.53	1.179	6.36	1.131	6.00	1.323	6.33	.884
ITEM12	5.94	1.345	6.19	1.345	5.56	2.007	6.23	1.135
ITEM13	5.06	1.749	5.60	1.556	5.22	.972	5.30	1.291
ITEM14	5.18	1.380	5.00	1.460	5.00	1.414	4.50	1.526
ITEM15	5.76	.903	5.36	1.309	4.78	1.202	4.83	1.289
ITEM16	6.59	.507	6.06	1.325	5.78	1.202	6.17	.913
ITEM17	6.24	1.033	5.40	1.556	5.56	1.014	5.33	1.348
ITEM18	6.12	.781	5.74	1.390	5.44	1.130	5.73	1.081
ITEM19	6.12	.928	5.91	1.349	5.44	1.236	6.23	.858
	N=17		N=47		N=9		N=30	

For the other industries, it is obvious that the favorable tax policies with a mean value of 6.8 headed the list, being followed by “the high quality service from government servants”, “the simplified administrative procedure”, “the stability of regulations and policy” and “subsidies from the local government” with mean values over 6. All of the five institutions have a low standard deviation, which can be interpreted that all the respondent companies have similar attitude to the first five institutions. When it comes to the least important three institutions, “the minimum amount of register capital”, “the high ratio of intangible property in

register capital” and “the incubation development center” have mean values below 5. They have standard deviations over 1.2, which shows that there are a wide spread of answers among the respondents.

Irrespective of the minor differences about the importance in terms of mean value between the four types of industries, according to the result of the non-parameter tests, there are no significant differences among most of the items. The exceptional items are “the incubation development center” with the a p-value of 0.001 and “the intellectual property rights protection” with the p-value of 0.044 far below the standard of 0.05. This shows that there are significant differences toward the importance of the two institutions among different industries. The reason behind the significant differences might be that the incubation development center is more favorable to the software industry than other industries and the intellectual property rights protection is more important to those Hi-Tech industries than the others.

However, when it comes to find the most important institution, the four types of industry chose the favorable tax policy simultaneously. It shows that there are no differences about the most important institution between different industries. In the case of Swedish companies, similarly, they all chose the favorable tax policy as the most important one regardless of different industries. This affirms the outcome of the questionnaire that “the favorable tax policies” is the most important one.

## **7.5 Analysis of Data from Companies in Different Sizes**

We grouped all the 103 respondent companies into three categories in terms of the number of employees. There are 56 respondent companies with employees below 50, 17 between 50 to 100 and 30 with more than 100 employees. We intended to investigate if there are any differences concerning attitudes to the 19 institutions when companies in different size are examined.

As to the companies having employees below 50, we can see that “the favorable tax policy” has the highest mean value of 6.73 and lowest standard deviation. The



result tells us that most respondents in this group put emphasis on favorable tax policies. The following institutions are “the simplified administrative procedure”, “the high quality service from government servants”, “the stability of regulations and policy” and “the local government subsidies”, having mean values over 6 and standard deviation below 1. It is interesting to find that “the autonomy of import and export” and “the minimum amount of register capital” with a low mean value of 5.21 and 4.88 respectively were listed at the end of the table. The explanation for the ignorance of the two institutions might be that the small-sized companies have few chances to do importing and exporting business and the demand for the amount of register capital of small-sized companies is not very high.

For the companies with employees between 50 and 100, we labeled this group as medium-sized companies. As far as this group is concerned, the result shows no significant difference compared with that from the small-sized companies. Once more, “the favorable tax policies” goes in the head of the queue and similarly “the high quality service from government servants”, “the stability of regulations and policy”, “the simplified administrative procedure” and “the perfect infrastructure and convenient transportation” were also important institutions having a high mean value over 6 and low standard deviation below 1. Unexpectedly, the institution of “the incubation development center” was placed in the tail of the line. This result can be interpreted that the companies falling within the group have grown maturely and the incubation development center that majored in providing protection for small and new companies is not necessary for them.

Compared with the former two groups, the big companies with employees more than 100 show some different indications referring to the order of importance about the 19 institutions. The three institutions of “the high quality service from government servants”, “the stability of regulations and policy” and “the simplified administrative procedure” obtained a similar mean value of about 6.5 and low standard deviation. Unexpectedly, “the favorable tax policies” ranked fourth

instead of first and “the low price of land” ranked fifth in this group. It may enable us to conclude that most of the big companies focus more on the efficiency of government than on the visible interests.

When it comes to test if there are significant differences between companies with different size, we used Anova one-way tests. The result illustrates that from the view of differently sized companies there are no dramatic differences about the importance of the 19 institutions except the institution of “the incubation development center” with the p-value of 0.023 far below the standard of 0.05. The interpretation might be that small-sized companies themselves are more vulnerable than big ones when they were exposed to risk. Therefore, they have different ideas about the importance of the incubation development center.

Table 7.4 : *The mean value and standard deviation of 19 institutions in different size from the questionnaire in the NHTP*

	Below 50		50--100		More than 100	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
ITEM1	6.55	.893	6.53	.800	6.50	.861
ITEM2	6.50	.831	6.76	.562	6.53	.937
ITEM3	6.34	.900	6.59	.870	6.53	.571
ITEM4	5.82	1.309	5.47	1.375	5.87	1.137
ITEM5	6.07	1.059	5.88	1.269	5.90	1.062
ITEM6	5.66	1.541	5.35	1.693	5.83	1.289
ITEM7	5.84	1.233	5.24	1.200	5.50	1.333
ITEM8	5.80	1.407	4.76	1.640	5.23	1.406
ITEM9	5.48	1.362	5.18	1.074	5.30	1.579
ITEM10	6.73	.774	6.88	.332	6.43	1.040
ITEM11	6.41	1.108	6.18	1.015	6.33	1.093
ITEM12	5.95	1.542	6.06	1.391	6.43	.817
ITEM13	5.21	1.534	5.53	1.281	5.63	1.450
ITEM14	4.88	1.502	4.88	1.453	4.90	1.447
ITEM15	5.38	1.369	5.06	1.298	5.03	1.033
ITEM16	6.25	1.148	6.29	.985	5.90	1.094
ITEM17	5.73	1.433	5.12	1.219	5.40	1.404
ITEM18	5.73	1.328	5.65	1.057	5.93	1.015
ITEM19	5.96	1.293	6.00	1.000	6.07	.980
	N=56		N=17		N=30	

When the companies in different size were asked to rank the five most important institutions, they all placed the favorable tax policies in the first. That is to say, there is no difference between companies in different size. Furthermore, the answers from Swedish companies also affirmed the result.

## **7.6 Analysis of Data from Companies in Different Types**

Three types of companies were defined in the questionnaire, that is, Chinese companies, joint venture and foreign companies. Chinese companies accounted for 54.4%, joint venture for 18.4% and foreign companies for 27.2%. In general, for each group, the mean value of each institution exceeds 4, which indicates that all the companies regardless of different types thought all the institutions are important for them to invest in the NHTP. However, there are minor differences when the degree of importance is examined.

For the Chinese companies, “the favorable tax policies” with a mean value of 6.77 is regarded as the most important one. The standard deviation is 0.687, meaning that there are a small spread of answers among the respondents. The institutions—“the simplified administrative procedure”, “the high quality service from government servants”, “the stability of regulations and policies” and “the subsidiaries from the local government” have mean values exceeding 6, meaning that they are also important for the Chinese companies. The standard deviations are less than 1 or around 1, indicating that there are little deviations from the mean value. It could be concluded that most Chinese companies think those five institutions are important for them to enter into the NHTP. Meanwhile, according to the Chinese companies, “the minimum amount of register capital” and “the autonomy of import and export” having mean values of 5.29 and 4.87 respectively are almost neglected in their decision-making.

When it comes to joint venture companies, the result looks similar to Chinese companies. “The favorable tax policies” has the highest mean value and low

standard deviation. That is to say, they considered the favorable tax policies as the most important institution and the attitudes are shared by the group members. “The high quality service from government servants” and “the stability of regulations and policies” have the same mean value of 6.47 and low standard deviations. The low price land, the perfect infrastructure and convenient transportation and the simplified administrative procedure ranked subsequently concerning the degree of importance. All the six institutions have a low standard deviation of around 1, which means that there are no significant differences about the attitudes to the importance of those institutions. The intangible ratio in registering capital with a mean value of 5.05 ranked last in the line. It can be interpreted that this institution is not as important as the others to in the view of the Chinese companies.

**Table 7.5:** *The mean value and standard deviation of 19 institutions in different type from the questionnaire in the NHTP*

	Chinese companies		Joint venture		Foreign companies	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
ITEM1	6.66	.745	6.21	1.032	6.50	.923
ITEM2	6.52	.831	6.47	.841	6.68	.819
ITEM3	6.39	.867	6.47	.772	6.50	.745
ITEM4	5.75	1.164	5.89	.994	5.75	1.624
ITEM5	5.96	1.061	6.11	1.049	5.96	1.201
ITEM6	5.61	1.498	5.79	1.182	5.68	1.701
ITEM7	5.71	1.246	5.37	1.257	5.68	1.335
ITEM8	5.71	1.289	5.11	1.049	5.21	1.988
ITEM9	5.32	1.363	5.63	1.300	5.32	1.492
ITEM10	6.77	.687	6.53	.964	6.57	.959
ITEM11	6.38	1.105	6.21	1.134	6.39	1.031
ITEM12	6.07	1.412	6.37	1.116	6.00	1.388
ITEM13	5.29	1.615	5.68	1.204	5.39	1.343
ITEM14	4.87	1.478	5.11	1.100	4.75	1.669
ITEM15	5.36	1.167	5.05	1.224	5.07	1.489
ITEM16	6.18	1.029	6.26	.872	6.04	1.401
ITEM17	5.71	1.187	5.42	1.216	5.25	1.838
ITEM18	5.82	1.130	5.84	1.119	5.64	1.393
ITEM19	6.09	1.100	5.89	1.049	5.89	1.343
	N=56		N=19		N=28	

Referring to foreign companies' attitudes to the 19 institution, we found that "the high quality service from government servants" with a mean value of 6.68 stays in the top of the line. The result is a little different from that from Chinese companies which took the favorable tax policies as the most important one. The explanation could be deployed that the foreign companies may focus more on avoiding conflicts between local government servants than on tax policies while Chinese companies have more advantages on dealing with government servants. The standard deviation of 0.819 implies that there are not sharply different ideas about the importance of the institution. The favorable tax policies, the simplified administrative procedure and the stability of regulations and policy have similar mean value of about 6.5, indicating that they have almost equal importance for the foreign companies. The standard deviations are less than 1, showing the similar attitudes to the importance of the three institutions. The subsidies from the local government, the perfect infrastructure and convenient transportation and the low price of land have similar mean values of about 6. In other words, these three institutions obtained homogeneous importance in the foreign companies' eyes. As far as the lowest mean value is concerned, "the minimum amount of register capital" having a mean value of 4.75 presented itself in front of us. However, the standard deviation for the institution is around 1.7, illustrating that there are a wide spread of attitudes among the respondents. Also, the intellectual property rights protection is almost neglected compared with the other institutions since it has a secondly smallest mean value of 5.07 and a standard deviation of 1.489.

As stated above, generally, there are no notable differences with regard to the importance of the 19 institutions as far as the different types of companies are concerned. Namely, all the respondent companies no matter what types they belong to enjoy similar attitudes to the importance of respective institutions. In answering the most important institution, the three types of companies consider similarly that "the favorable tax policies" is the most important one. It is interesting to find that the Swedish companies regarded the stability of regulations and policies as the

most important one while the foreign companies in the NHTP regarded the favorable tax policies as the most important one. The reasons behind the differences might be that those foreign companies which have started business in China may be familiar with China's policy and regulations more than those outside of China.

## **7.7 Other Important Institutions**

According to the theory in Chapter 3, we listed nineteen institutions which are important to attract investment. However, there is possibility for participants to add other important institutions not being mentioned in the questionnaire. Open questions gave such chances to respondents to write down the other important institutions.

In the questionnaire from the NHTP, ten participants wrote that the head of administrative committee was an important factor for the operating environment. We may infer that, in their opinions, the head of administrative committee have big influence on making a policy and implementing a policy. We think the factor itself is not institution. However, it can be grouped into the institution of "the stability of policy and regulations". Five participants mentioned the public security was important and two participants indicated that the culture environment and business environment was important. About twenty Swedish companies in the questionnaire mentioned that intellectual property rights protection was important when they make investment decision. This can be explained that the companies in Swedish companies may think there are many violations of intellectual property rights. And when we interviewed the companies in the NHTP, ten of them also emphasized the intellectual rights protection especially in software companies.

## **7.8 Summary**

In general, all the listed 19 institutional changes are important in the view of all respondent companies regardless of industry, scale and type. All the companies

think “the favorable tax policies” is the most important institution. From perspective of four different industries, there are no significant differences about the importance of most institutional changes. The only two exceptional ones are “the incubation development center” and “the high ratio of intangible property in register capital”. That is to say, different industries have various attitudes when it comes to the importance of the two institutions. If we investigated the respondent companies in different size, there are no significant differences about the importance of the 19 institutions except the institution of “the incubation development center”. It may due to the fact that small-sized companies themselves are more vulnerable than big ones in dealing with risks. The attitudes of companies in different type to the importance of the 19 institutions are similar when they decide to invest in the NHTP.

## Chapter 8: Conclusion

---

*Within this chapter the conclusions are present. The most important institution is discussed. Suggestions for the government, suggestions for further research and practical implications are presented and the dissertation is summarized.*

---

### 8.1 Conclusion of the Results

In order to find whether the institutional changes are important or not, we conducted two surveys by using anonymous questionnaires in the NHTP and in Sweden. The participants were contacted by the letters that delivered by our colleagues working in the NHTP. Our main samples consisted of 123 firms located in the NHTP. One hundred and three companies returned the questionnaire, resulting in an active response rate of 83.7%. We interviewed some companies both in Sweden and in the NHTP to make our survey result more reliable and general.

We used SPSS to analyze the questionnaires from 103 companies in the NHTP and 26 companies in Sweden. The result of the research showed that all the 19 institutions were important for companies to make decision to enter into the NHTP. The outcome of the interview from the companies in the NHTP, which is compatible with that from the questionnaire, increased the reliability of the result from the questionnaire. Another questionnaire in Swedish companies as potential investors also showed the 19 institutions were important for companies in making decision to enter the NHTP, which increased the generalisability of our finding.

The favorable tax policy is the most important institution according to the survey in the NHTP. A stability of regulations and policy, a simplified administrative procedure, the high quality service of servant and subsidies from the local government are the other four most important institutions. The outcome of



interview in the NHTP is the same with the result of the questionnaire that the most important institution is the favorable tax policies. The favorable tax policy, subsidies from the local government are the visible and direct profit that company can get. The simplified administrative procedure, the high quality service of servant and the stability of regulations and policy are related with the government efficiency. Five most important institutions can be grouped into two types that are the visible profits and efficiency of government. They are the most important institutions.

Nevertheless, Swedish companies regarded that the stability of regulations and policy ranked first as the most important institution, which is different from the result from the NHTP. The reason behind the difference might be that Swedish companies know little about China that is far from the territory of Sweden. As a foreigner, they may be not sure about China's political policy and fear that a political instability may lead to a great loss for their investment in the NHTP. Irrespective of the difference about the most important institution, the favorable tax policies, subsidies, simplified administrative procedure also fall within the five most important institutions. Therefore, we may say that the result from Swedish companies almost goes well with that from the NHTP.

According to analysis, all companies regardless of industry, size and type thought the 19 institutions were important for them to invest in the NHTP. There are no notable differences with regard to the most important institutions between various kinds of companies. All of the companies selected the five most important institutions which can be grouped into two categories, and they are the visible profits including "the favorable tax policy, subsidies from the local government" on one hand, the efficiency of government including "the stability of regulations and policy, the simplified administrative procedure, the high quality service of servant" on the other hand. "The favorable tax policy" heads the list of the five most important institutions. But different industries have various attitudes when it

comes to the importance of the incubation development center and the ratio of intangible in registering capital.

There are some other important factors that the participants mentioned. Some of the participants think the head of administrative committee, the culture environment and business environment, and the public security were important. They think that the head of administrative committee may have big influence on making a policy and implementing a policy. When we interviewed the companies in the NHTP, they also emphasized the intellectual rights protection especially in software companies.

## **8.2 Practical Implication**

This dissertation has significant meaning of practical implication. We will present the result to the administrative committee of the NHTP. So the committee can understand what institutions are important to investors and pay more attention to the function of institutions and provide optimal institutions to serve the companies. It may be helpful for the government to keep good institutions and improve inefficient institutions. Furthermore, Chinese government has realized that the efficient institutions can promote economic growth, therefore, more and more efficient institutional changes are carried out especially after China entered WTO. How to establish efficient institutions to comply with drastic global competition is a big challenge to Chinese government as well as to companies. So this research can be helpful for governments to establish new institutions.

## **8.3 Suggestions for the Government**

First, we suggest governments pay high attention to efficiency of government. There may be some differences between officials and companies concerning the importance of institutions. To some officials, they consider low price of land and favorable tax are important to investors since land price and tax are closely related to the direct costs of company. But to investors, they may consider that low cost

land and favorable tax are short-term interests and the efficient service of government is more related to their long-term interests. So when they make decision, they are concerned with both long-term and short-term interests. The survey showed that simplified administrative procedure and high quality service of government service are important to attract investors. Therefore, the government should focus on improving the efficiency of government as well as provide favorable tax policy.

Second, governments should make policy more transparent and provide sufficient information for foreign investors. Although some policies and services are understood easily by Chinese Companies, they are difficult for foreigners to understand. Administrative committee should try to offer more information such as administrative rules, economic policies to the potential investors. Government department such as the investment service center should be strengthened to provide these services.

Third, since stability of policies and regulations are important, governments should make efforts to keep policies stable including keeping the stability of Administrative Committee. The temporary administrative committee has negative impact in attracting investors according to the respondents and the analysis of the theories. Fortunately, ACT OF NINGBO HI-TECH PARK MANAGEMENT was approved by local People's Congress of Ningbo city recently, which is a good support to make the administrative committee stable.

#### **8.4 Suggestions for Further Research**

Since institutions are important to attract investors and promote economic growth, we believe it is worthy of doing further research. With this dissertation as an experimental test, further research can be done in the following areas:

- Since we limited the study in the specific area, which reduces the possibility of

generalizing research results, it will be meaningful to do a larger survey or case study on other Hi-Tech parks in China or in other countries to get more useful information. Such further research can improve the value of research. We can investigate the relationship between institutions and economic growth more deeply and generalize the result better.

- Four theories of the NIE theory were employed in the dissertation. We mentioned Porter's Diamond theory can explain the significant economic growth, but whether there are any other theories can be used to analyze the significant economic growth in the NHTP. Can we illustrate the relationship between institutions and economic growth from other perspective instead of investment increase? It will be interesting to do such kinds of research.

- In the dissertation, transaction cost reduction was only analyzed by the quality analysis. It is not as precise as being expected. If we can calculate the data such as the transaction costs exactly, the result may explain better whether institutional changes can reduce transaction costs and improve investment.

- Some institutions such as favorable tax policies, which are positive to attract the investors, but it, may be unfair to the companies who did not enter the NHTP. These institutions may promote economic growth in the NHTP, but it may not promote the whole social development. This is worthy to investigate.

- The quantity of interview companies can be increased. The questionnaire cannot cover everything. If we interview more companies, we can get more useful information and generalize the result of research.

## **8.5 Summary of Dissertation**

The aim with the dissertation is to investigate the operation of the NHTP to know why this area was established, to find the differences between the institutions of the

NHTP and Ningbo City, and to find out if these institutions are positive or negative in attracting investors. Finally, we intended to find which one is the most important institution for the investors when they make a decision to invest. We also analyzed the impact of the institutions on economic growth.

In the dissertation, we presented four theories such as the theory of institutional change, the theory of state, the theory of property rights and transaction costs theory. The Solow Growth Model and Porter's Diamond Model were shortly introduced in order to give a picture of the relationship between institutions, investment and economic growth. We used the NIE theory to carry out our research because we thought that the New Institution Economics is a foundation theory explaining how institutional changes give individuals and organizations incentives to invest in the NHTP and ultimately improve economic growth.

The establishment of the NHTP is a mixture of induced and imposed institutional changes. It was the defects of the traditional institutional arrangement that forced organizations and government to look for more advanced institutional arrangement and for more profitable opportunity, hence institutional changes were induced and imposed. Economic growth may lead to institutional changes with continuous interaction between institutions and different organizations. We shaped model called the circulation of institutional changes that indicated how institutional changes happened and the NHTP was established (see figure 4.2). Governments at different level play key role in the process of institutional changes.

The result of research is that all the different institutions carried out in the NHTP compared with Ningbo City are important in attracting investors regardless of industry, size and type. The five most important institutions can be grouped into the visible profits including "the favorable tax policy, subsidies from the local government" on one hand, the efficiency of government including "the stability of regulations and policy, the simplified administrative procedure, the high quality

service of servant” on the other hand. “The favorable tax policies” is the most important institution. The establishment of the NHTP with some new institutions is positive to economic growth.

A survey consisted of questionnaire and interview was used to test our research questions. It made the research more reliable and general. But we limited our research to the specific area that is the NHTP, so it is difficult to generalize our research result. However, as we conducted a questionnaire in Sweden and collected potential investors’ opinion about the importance of the different institutions for their investment decision-making, the research result can be generalized to some extent. We have tried to expand our samples in the NHTP. If we can research more Hi-Tech parks in China, we can generalize research result better.

## Reference:

- Arrow, Kenneth J., "the organization of economic activity: issues pertinent to the choice of market versus nonmarket allocation." In *The Analysis and Evaluation of Public Expenditure, Vol.1: The PPB System: 59-73. U.S. Joint Economic Committee, 91<sup>ST</sup> Congress, 1<sup>st</sup> Session. Washington, DC:U.S. Government Printing Office.*
- Barney, J. B. (1990). The debate between traditional management theory and organizational economics: Substantial differences or intergroup conflict? *Academy of Management Review*, 15(3): 382–393.
- Barzel, Yoram (1989), *Economic analysis of property rights*, Syndicate of the University of Cambridge
- Cheung, S.N.S. 1969. "Transaction cost, Risk Aversion, and the Choice of Contractual Arrangements." *Journal of Law and Economics* 12:23-45
- 1970, "The Structure of a Contract and the Theory of a Non-exclusive Resource." *Journal of Law and Economics* (No.1, April)
- 1983, The contractual Nature of the Firm, *The Journal of Law and Economics*, April,
- Coase, Ronald.H (1988). *The Firm, the Market, and the Law*, Chicago and London: University of Chicago Press
- 1991, "the institutional structure of production", *Nobel Lectures in Economic Sciences 1991-1995*, World Scientific Publishing Co.Ltd
- 1991, "the problem of social cost", *Journal of Law and Economics*,3, No1
- 1998, "The New Institutional Economics", *The American Economic Review*, Vol.88, No.2: p72-74
- Dahlman, Carl J. (1979). "The Problem of Externality" *Journal of Legal Studies* 22(No. 1):141-162
- Demsetz, Harold (1967), "Forward a theory of property rights", *the American Economic Review*, Vol 57.No2
- Daniel Ankarloo,(1999). *"Institutions", What Is In a Word? A Critique of the New Institutional Economics.* Lund university press 1999
- Eggertsson, Thráinn (1990), *Economic behavior and institutions*, Syndicate of the University of Cambridge press

- Eirik G. Furubotn and Rudolf Richter (1998), *Institutional and Economic Theory*, The University of Michigan Press
- Geoffrey M. Hodgson,(2004). *The evolution of institutional economics*, Routledge press 2004
- Jairo J. Parada (2002). “*Original Institutional Economics and New Institutional Economics: Revisiting the Bridges(Or the Davide).*”
- James, Gerber (2005), *International Economics*, third edition, Pearson Education, Inc.
- J.E.Meade. (1992) *Liberty, Equality and Efficiency*, London: The Macmillan press Ltd.
- Knight, Jack and Sened, Itai edited (1995), *Explaining Social Institutions*, The University of Michigan Press
- Justin Yifu Lin. (1989). An Economic Theory of Institutional Chang: Induced and Imposed Change, *Cato Journal*, Vol.9, and No.1
- Matthews, R.C.O.(1986). “The Economics of Institutions and the Sources of Growth.” *Economic Journal* 96(December): 903-910,P906
- Malcolm Rutherford (2001), Institutional Economics: Then and Now, *The Journal of Economics Perspectives*, Vol.15, No 3,p173-194
- Milgrom, Paul and Roberts, John (1992), *Economics, Organization and Management*, New Jersey, Prientice Hall
- North, Douglass C. (1981), *Structure and Change in Economic History*. New York: W.W.Notton.
- 1990, *Institutions, Institutional Change and Economic performance*, Cambridge University Press, 1990
- 1992, *The New Institutional Economics and Development*,  
<http://www.econ.iastate.edu/tesfatsi/NewInstE.North.pdf>.
- 1989, *Institutional Change: A Framework of Analysis*,  
<http://econwpa.wustl.edu:8089/eps/eh/papers/9412/9412001.pdf>.
- Parkin, Michael (1990), *Economics*, New York: Addison-welsey Publishing Company
- Porter, M., E. (1990), *The Competitive Advantage of Nations*, New York (NY): Free Press.



Saunders, Mark, Philip Lewis and Adrian Thornhill (2003), *Research Methods for Business Students*, Printed and bounded by Ashford Colour Press Ltd, Gosport.

Simon, H. (1947). *Administrative Behavior*. New York: The Free Press.

Smith, Adam (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*,

William, J. Boyes (1991), *Macroeconomics: Intermediate theory and policy, third edition*, SOUTH-WESTERN PUBLISHING CO. Cincinnati, Ohio

Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust Implications*, New York: The Free Press.

Williamson, O.E.(1979) ***Transaction-cost Economics: The Governance of Contractual Relations***

1985, *The Economic Institutions of Capitalism*, New York: The Free Press.

1991, Comparative economic organization: The analysis of discrete structural alternatives, *Administrative Science Quarterly*, 36: 269–296.

杨小凯， 产权理论和中国改革, [http://www.boxun.com/hero/yangxk/52\\_1.shtml](http://www.boxun.com/hero/yangxk/52_1.shtml)

<http://www.statcan.ca/english/edu/power/ch11/first11.htm>

<http://www.statcan.ca/english/edu/power/ch12/variance.htm>

[http://www.cas.lancs.ac.uk/glossary\\_v1.1/nonparam.html#nonparat](http://www.cas.lancs.ac.uk/glossary_v1.1/nonparam.html#nonparat)

[http://www.valuebasedmanagement.net/methods\\_porter\\_diamond\\_model.html](http://www.valuebasedmanagement.net/methods_porter_diamond_model.html)

<http://pacific.commerce.ubc.ca/ruckman/competitiveadvofnations.htm>

<http://www.themanager.org/models/diamond.htm>

# Appendix 1:

## Questionnaire

Dear respondents:

We are public servants dispatched by Ningbo municipal government and studying in Sweden for a Master degree. Now, we are writing a Master dissertation about the relationship between institutions and economic development based on Ningbo High Technology Park (NHTP). The main purpose of this research is to test if institutional changes have an impact on economic development and find out which institution is most important for companies to make decisions on investing in the High Tech Park.

This questionnaire is designed for the dissertation. All information collected from the questionnaire will only be presented in our dissertation and all private information will be kept completely confidential.

Thank you for taking time to answer the following questions. Please read the guide carefully before you answer the questions. If you have any questions about questionnaire, please call 0086-574-87906804 or email the address eliyj@hotmail.com. When you have completed the questionnaire, please return it to us before May 8th in the enclosed envelope.

Thank you for your help!

### General information

**Guide:** Please answer the following questions according to general information about you and your firm. Please tick  in the  based on the facts for questions from 1 to 7.

1. What kind of production or service does your firm provide?

- Electronic product     Pharmacies     Software  
 Mechanical industry     Different service  
 Other \_\_\_\_\_ (please describe it)

2. How many employees are in your company?

- Below 50       50--100       More than 100

3. What type of business organization does your company have?

- Foreign Companies       Joint venture       China Companies  
 Other\_\_\_\_\_ (please describe it)

4. What is your position in the firm?

- Owner       General Manager       Member of board  
 Other\_\_\_\_\_ (please describe it)

### **Institutions in different aspects**

**Guide:** The following questions are designed to find out whether or not the listed items are important and the degree of importance for the companies to decide investing or expanding in Ningbo High Tech Park. Please circle the number that best corresponds with your view.

Scale: 1=not important at all

4=neither important or unimportant

7=very important

1. How important is a simplified administrative procedure when you make a decision to invest in the NHTP?

**1**-----**2**-----**3**-----**4**-----**5**-----**6**-----**7**

1=not important at all

7=very important

2. How important is the high quality service from Government servants when you make a decision to invest in the NHTP?

**1**-----**2**-----**3**-----**4**-----**5**-----**6**-----**7**

3. How important is the stability of regulations and policy when you make a decision to invest in the NHTP?

**1**-----**2**-----**3**-----**4**-----**5**-----**6**-----**7**

4. How important is it for you that the Administrative committee remains the same for a foreseeable period of time when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

5. How important is it that the investment service center can provide different services such as financial, accounting and talent information, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

1=not important at all

7=very important

6. How important is it that a convenient customs service is available to shorten time for clearing customs, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

7. How important is the institution of investment and technology consultancy, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

8. How important is the existence of an incubation development center that is built to reduce the risk of running a new Hi-Tech industry, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

9. How important is an exchange center that is established to recruit engineers, seek venture capital investment and exchange property rights, when you make a decision to invest in NHTP?

1-----2-----3-----4-----5-----6-----7

1=not important at all

7=very important

10. How important is a favorable tax policy when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

11. How important is it that the local government gives subsidies such as R&D funds when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

12. How important is it that your company obtain low price land compared with other districts when you make a decision to invest in NHTP?

1-----2-----3-----4-----5-----6-----7

13. How important is it that your company can enjoy the autonomy of import and export when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

1=not important at all

7=very important

14. How important is it that your company can register a new company with a minimum amount of register capital compared with other areas, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

15. How important is it that intangible ratio in registering capital in the NHTP when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

16. How important are perfect infrastructure and convenient transportation in the NHTP, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

17. How important is the existence of related industry in the HTP, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

18. How important is a good living environment when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

19. How important is a good physical environment such as beautiful parks, green grass and well-educated engineers working in NHTP, when you make a decision to invest in the NHTP?

1-----2-----3-----4-----5-----6-----7

Feel free to write the other factors that are important for investors on the line

-----

We have abbreviated the above questions and listed them in the following table. Please choose five of the nineteen items that are more important to you than the others and rank them from 1 to 5. 1 is the most important and 5 the least important of your 5 most important issues.

Example:

1: the most important → example item 5

2: the second most important → example item 8

3: the third most important → example item 3 ... and so on

Items		Your ranking	Example
Item 1	Simplified administrative procedure		
Item 2	The high quality service from Government servants		
Item 3	The stability of regulations and policy		3
Item 4	A Stable Administrative committee		
Item 5	The investment service center		1
Item 6	A convenient customs service		
Item 7	The institution of investment and technology consultancy		
Item 8	The incubation development center		2
Item 9	An Exchange center		
Item 10	Favorable tax policies		
Item 11	Subsidies from the local government		
Item 12	Low price land		4
Item 13	Autonomy of import and export		
Item 14	Lower registering capital		
Item 15	intangible ratio in registering capital		
Item 16	Perfect infrastructure and convenient transportation		5
Item 17	The existence of related industry		
Item 18	A good living environment		
Item 19	A good physical environment		
Other items	(Please add your own suggestion here)		

Thanks again!

## Appendix 2:

### Questionnaire

Dear ladies and gentlemen:

Please answer the following questions, choose the rank according to your opinion about the importance of the following items for you to invest in China. Thanks!

Scale: 1=not important at all

4=neither important nor unimportant

7=very important

1. What kind of production or service does your firm provide?

Electronic product     Pharmaceutical     Software

Service industry     Others \_\_\_\_\_

2. Government servants service quality

**1   2   3   4   5   6   7**

3. The stable regulations and policy

**1   2   3   4   5   6   7**

4. Investment service center providing comprehensive services such as financial, accounting, talent information for companies

**1   2   3   4   5   6   7**

5. Convenient customs service

**1   2   3   4   5   6   7**

6. Investment and technology consultancy

**1   2   3   4   5   6   7**

7. Favorable tax incentives and local government subsidy

**1   2   3   4   5   6   7**

8. A simplified administrative procedure and high efficient bureaucracy system

**1   2   3   4   5   6   7**

9. Low price of land

**1   2   3   4   5   6   7**

10. The autonomy of importing and exporting

**1 2 3 4 5 6 7**

11. Intellectual property rights protection

**1 2 3 4 5 6 7**

12. Perfect infrastructure and convenient transportation network

**1 2 3 4 5 6 7**

13. Centralization of the related industry

**1 2 3 4 5 6 7**

14. Good living environment

**1 2 3 4 5 6 7**

Please choose ten of the fourteen items that are more important than others and write the number in the sequence of importance on the line.

-----

Feel free to write down other factors that are important in your opinion to invest in China.

-----

If you want to know more information about China, please send email to us:  
[elijah@hotmail.com](mailto:elijah@hotmail.com)

Thanks again!