THE IMPACT OF THE POST-1993 ECONOMIC REFORMS ON CHINESE STATE-OWNED ENTERPRISES: EVIDENCE FROM THE ELECTRONICS INDUSTRY

YINFANG ZHANG
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Researcher:	**Yinfang Zhang**
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Academic Supervisor	**Professor David Parker**
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Thesis Summary

Since 1979, China has embarked on a series of economic reform programmes, leading its socialist economy away from a Soviet planning model towards a much greater reliance on the market. In the course of the last twenty years, the Chinese economy has enjoyed a phenomenally high economic growth rate. However, earlier research suggests that Chinese state-owned enterprises remain a financial 'black hole' for the Chinese economy, in spite of various enterprise reform measures.

This thesis tries to assess the impact of the reforms after 1993, especially the so-called Modern Enterprise System, on the behaviour and management practices of state firms. The central research question is whether the new round of economic reform have changed state firms into commercial entities operating according to market signals, as intended. In order to explore this question, an institutional approach is employed. More specifically, the thesis examines how the behaviour and management practices of state enterprises have changed with changes in the institutional environment resulting from the introduction of new reform measures and especially the MES.

The main evidence used in this research comes from the Chinese electronics industry (CEI). Non-state firms, namely collectives and joint ventures, are involved in the study to provide a benchmark against which changes in the behaviour of state firms in the mid and late 1990s are compared. A comparative statistical analysis shows that state-owned firms, both traditional and corporatised ones, still lag behind collectives and joint ventures, in terms of both labour and total factor productivity. The further empirical work of this research consists of a questionnaire survey and case studies that are based on interviews with senior managers of 17 firms in the CEI. The findings of these analyses suggest that there has been little fundamental change in the behaviour pattern of state firms in the 1990s, despite the introduction of the Modern Enterprise System, and that the economic reforms after 1993 so far seem to have failed to transform the state firms into commercial entities operating according to market signals.

Keywords: Ownership, Institution Environment, SOEs, China, Enterprise Behaviour.

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List of Abbreviations

AC	Air Conditioner
AM	Air Moistener
AP	Air Purifier
AV	Audio-Video
BF	Beijing Feida Electronics Company
BJJH	Beijing Jinghai Group Company
BJJVC	Beijing JVC Industry Ltd.
BJP	Beijing Peony Electronics Group Co. Ltd.
BJTE	Beijing TV Equipment Factory
BJYD	Beijing Yadu Science and Technology Co., Ltd.
CCP	Chinese Communist Party
CCPM	Chinese Communist Party Member
CEI	Chinese electronics industry
CMRS	Contract Management Responsibility System
CR	Cassette Recorder
DPS	Dual-track Price System
EIOB	Electronics Industry Office of Beijing
FFYP	First Five Year Plan
GCR	Great Cultural Revolution
GDP	Gross Domestic Product
GLF	Great Leap Forward
GNP	Gross National Product
GVIO	Gross Value of Industrial Output
MES	Modern Enterprise System
NJA	Nanjing Audio Co. Ltd.
NJHQ	Nanjing Hongqi Radio Fatory
NJP	Nanjing Panda Electronics Group Co. Ltd.
PRC	People's Republic of China
QDH	Qingdao Hisense Electronics Group Co. Ltd.
SHJX	Shanghai Jinxing Electronics Ltd.
SHKW	Shanghai Kenwood Electronics Co. Ltd.
TFP	Total Factor Productivity
TFYP	Third Five Year Plan
TJGW	Tianjin Great Wall (Group) Co. Ltd.
TJSS	Tianjin Samsung Electronics Co. Ltd.
TVE	Township and Village Enterprise
SEC	State Economic Commission
SFYP	Second Five Year Plan
SHBT	Shanghai Broadcasting and TV Group Holding Company
SHKW	Shanghai Kenwood Electronics Co. Ltd.
SPC	State Planning Commission
SSB	State Statistical Bureau
CR	Cassette Recorder
VC	Video Camera
VCD	Visual Compact Disc Player
VCR	Video Cassette Recorder

Chapter 1. Introduction: Nature of the Research, Methodology and Methods, Limitations of the Research and Organisation of the Thesis

This chapter sets out the nature of this doctoral research project, the research questions, the methodology and methods used, and the limitations of the research. The purpose of this chapter is to provide a preliminary understanding of what this thesis is about and how the text is organised.

1.1 The Nature of the Research and the Research Aim

The economic reform programme launched in China in the later 1970s is one of the most important events in recent world economic history and has had a major impact on the development of the global economy in recent years. In the course of two decades, there has been enormous change in the social, economic and industrial life of China. Under the guideline of liberalising production, proclaimed by reform-minded government leaders, China has been leading its socialist economy away from a Soviet planning model towards a much greater reliance on the market. The pace of modernisation in China has been so great that in the past two decades the country has experienced changes that in large parts of the West spanned centuries. From the experience of the western world industrialising in the eighteenth and nineteenth centuries, as well as that of the former communist economies reforming in the last quarter of the twentieth century, it is clear that the process of economic transition in China will involve uncertainty, and both benefits and costs.

Economic reform in China has attracted worldwide attention not only because of the vast size of the country, in terms of both territory and population, but because of its unique approach towards economic transition. In many of the former Central and Eastern

European communist economies, privatisation took place quickly; while in China the experience of the last score years has represented a quite different model. Market mechanisms have been introduced in an incremental fashion and into a socialist system that retains dominant public ownership. Since the early 1980s, China has enjoyed a phenomenally high economic growth rate, and this growth, compared with the former communist countries, is especially noteworthy (see Table1.1). However, the exciting growth figures should not be allowed to mask critical problems in the Chinese economy. In consequence, arguably it is still too early to judge the Chinese model as a long-term success.

Table 1.1 Real GDP Growth Rates in China and Some Former Communist Economies (% Change over Previous Year)

	1990	1995	1996	1997	1998	1999	1989-99
P.R.China	4.1	10.2	9.6	8.8	7.8	7.1	10.5
Czech Rep.*	-1.2	5.9	3.8	0.3	-2.3	-0.2	0.8
Bulgaria	2.7	3.1	3.6	4.1	3.5	2.4	-3.3
Hungary	-3.5	1.5	1.3	4.6	4.4	4.5	0.2
Poland	na	3.0.	na	na	4.8	4.1	4.7
Romania	-5.7	7.1	3.9	-6.6	-4.9	-3.2	-1.5
Russia**	-3.0	-4.1	-3.4	0.9	-4.9	3.2	-6.2

*: Czech Slovakia Federal Republic in 1990
**: USSR in 1990
na: not available
Source: figures in years 1990, 1995, 1996, 1997 from *The International Statistical Yearbook, 2000*, the others from the World Bank.

Chief among the problems is the perennial and intense frustrations faced by having to reform state enterprises. In spite of a number of reform efforts in this sector, the financial performance of state-owned enterprises (SOEs) at large seems to have deteriorated. Absorbing more than four-fifths of the total domestic bank credits, the profits generated by state industrial enterprises accounted for less than 1% of GDP in 1999, compared with 6% a decade earlier (Broadman, 1999). Meanwhile, the state sector's share in gross value of industrial output (GVIO) fell from 77.6% in 1978 to 28.2% in 1999 (*The Statistical Yearbook of China*, 2000). Factory-capacity-utilisation rates in state firms for major industrial products have fallen below 60 percent (Broadman, 1999). At the same time, the state sector remains a main source of government revenue, a major consumer of resources, and the most important employer for workers. Therefore, as long as the economic problems in the state sector remain unresolved, the question is not only whether China can continue its long-term economic success, but whether the gains the nation has made up to the present time can be sustained.

As early as the late1950s China made attempts to tackle the defects of the central planning system, introduced after the Chinese Communist Party (CCP) took over the country. However, the efforts were constrained within the continuing framework of a planning system, swinging between centralisation and decentralisation (this is discussed more fully in Chapter 2). They failed to address the core problems of information (what goods to produce or what economists call 'allocative efficiency') and incentives (how to produce or what economists call 'productive efficiency'). It was not until 1979 that China embarked on the current period of economic reforms, which are of an unprecedented scale and scope.

The reform measures introduced after 1979 can be seen as the first tentative steps towards introducing market elements into the Chinese economy. Most of the attempts in the industrial sector in the early stage focused on providing incentives and granting autonomy to state enterprises in order to improve productivity. In place of the term 'revenue surpluses', the word 'profit' began to be used in Chinese firms, after the scheme of profit retention was implemented in SOEs in the early 1980s. For sake of convenience, 'revenue surpluses' and 'profit' are used interchangeably in the text of this thesis. Before the nationwide implementation of management delegation and profit retention, experiments were carried out in Sichuan province. Only after the third Plenary Session of the Twelfth Central Committee of the CCP, in 1984, did a reform policy to affect the whole economy take shape.

As explained in Chapter 2, the years from 1984 to 1993 were a period associated with fiscal reform and further introducing market incentives. To induce the management of state firms to make decisions based more on market signals, a dual price system was introduced, alongside the gradual replacement of state directive plans by guiding ones. As a measure to provide firms with stronger incentives to improve outputs, profit taxes took the place of the earlier scheme of profit remittance from enterprises to government departments. The most important reform measure during this period, however, was the Contract Management Responsibility System (CMRS), implemented in firms with state ownership and in some collectives. With the objective of clarifying authority and responsibility between enterprises and their administrative bureaux, the CMRS began with experiments in a small number of state firms. In 1987 it was extended across the whole economy. But because of problems embedded in the CMRS, the intended improvement in allocative and productive efficiency failed to emerge (the problems of the CMRS are detailed in Chapter 2). Hence, China launched a new round of reform in the state sector after 1993. It is the latest reforms or more precisely their impact on behaviour and practices in state-owned firms that is the principle subject of this thesis.

The enterprise reforms after 1993 have revolved around building the Modern Enterprise System (MES) in the state sector, as a means to improve firms' performance. Three main tasks of this reform are 'reforming', 'restructuring' and 'reconstruction' (Morris, 1995). Under the government's guideline of 'grasp the big ones, let go of the small ones' (*Zhua Da Fang Xiao*) in the second half of the 1990s, some state enterprises have been corporatised as either joint stock companies or limited liability companies[1], and some have been handed over to private hands. Meanwhile, in the wider economic environment, reform measures have been introduced in areas of finance and banking, the employment system and social security, in order to further develop the so-called 'socialist market economy'.

Since the 1980s, how to revitalise the SOEs has been the main theme of the economic reforms. In spite of the various reform measures mentioned above and described in detail in Chapter 2, the state sector seems to remain a financial 'black hole' for the Chinese economy. The deteriorating relative performance of state firms stands in sharp contrast to the high economic growth China has enjoyed since 1979. It also contrasts with the emphasis that Chinese policy makers have put on in this sector in the 1980s and the

[1]In the Chinese context, according to the MES, a limited liability company is not necessarily a joint stock company; while a joint stock company is definitely a limited liability company. See Table 1.3 for the categorisation of these two types of corporations.

1990s. It is, therefore, very pertinent to ask how SOEs have changed and precisely what problems still exist.

The main aim of this thesis is to examine the impact of the reforms since 1993, especially the so-called MES. **The central research question** is whether the economic reforms in the 1990s have changed SOEs into commercial entities operating according to market signals, as intended. In order to explore this question, several sub-questions are addressed. **First**, have there been fundamental changes in the institutional environment of the firms following the new reform measures that were introduced after 1993? **Secondly**, what kind of co-ordination mechanism, market or bureaucratic, is used by the firms after more market elements were introduced into the Chinese economy? **Thirdly**, have changes in the external environment led the firms to establish an organizational structure and management practices well tailored to their business needs?

In order to answer these questions, corporatised SOEs and non-corporatised SOEs in China are studied and compared, to see whether reformed SOEs show dramatic differences in both their external relations and internal management to unreformed SOEs, during the 1990s. However, progress made by the state sector is by itself not enough to make a judgment on the effects of the reform process. Arguably a comparison also needs to be made with changes in behaviour and practices in other ownership forms. The rationale for this is simple: a horizontal comparison of behaviour across different ownership types may be able to reveal whether SOEs have become commercial entities, as the reforms in China expected. As China's economy has developed, we might expect the economic prospects of the SOEs to have benefited. Some studies (for example, Nolan, 1995; Perkins, 1988) have arrived at the conclusion that management and organisation in Chinese SOEs have improved. Probably this is true, but this may not be so true when we compare the extent of these changes with what has been happening in firms under other forms of ownership. Based on the experience of China's economic reforms in the 1980s, Nee (1992) categorises Chinese state firms as 'non-market enterprises' and some collectives (especially township and village firms) as 'market enterprises'. By studying four groups of Chinese enterprises, namely SOEs, collectives, private firms and firms partnering with foreign businesses, Tung (1991) concluded that collectives in township and rural areas and joint ventures are more business-oriented than state firms. Similar arguments are also made by Weitxman and Xu (1994), Warner (1994) and Child (1996, ch.3). In this thesis, collectives and joint ventures (in the analysis reported in Chapters 4 and 5, the categories of wholly foreign owned firms and joint ventures are combined into one group labeled 'joint ventures') which are considered more market-oriented, are studied as a benchmark against which changes in the behaviour of state firms in the mid and late 1990s are compared. Therefore, it is the relative rather than absolute changes in state firms following the reform measures from 1993, that are assessed in this thesis.

The main evidence used in this research comes from a single industry, the Chinese electronics industry (CEI). Since the study employs comparisons across different ownership types, it is important to control for other factors that might affect behaviour and performance, in order to distinguish more clearly differences associated with ownership. Some Western scholars (for example Woodward, 1965, 1970; Perrow, 1970) have argued that technology is one of the factors that can affect a firm's management and organisational structure. By focusing on only one industry, the research attempts to reduce the impact of technology on management and organisational behaviour. Furthermore, in China variance in policy implementation has been observed across different industries (Child, 1996, p.46). The industries of strategic importance, for example, usually receive more government support and protection and, in turn, suffer greater administrative intervention. The strategy of studying one-industry adopted in this thesis may, therefore, decrease the effect of policy asymmetry.

The reason for choosing the CEI was three-fold. First, this industry includes all the ownership types the research is interested in. There are also varieties within each ownership category. Among the collectives, for example, there are those established in the central planning era and therefore receiving production quotas, as well as those set up after economic reform began. Such rich ownership and sub-ownership varieties provide a good base for comparison. Secondly, the CEI is one of the pillar industries in China, whose output is expected to reach 8% of China's GVIO by 2002. Lastly, I had established some contact with firms in the CEI before I began my PhD studies. By choosing this industry, I hoped that access to enterprises, which is always difficult in the context of researching China, would be a little easier.

1.2 Methodology and Methods

1.2.1 A Qualitative Approach

Generally speaking, research studies can be categorised into two basic types of scientific enquiries, namely deductive and inductive. The distinction between them lies in the relationship between theory and the empirical data of a study. Whilst both these methodologies are ultimately concerned with the development of theory, the direction from which this task is approached is different. A deductive research involves the clarification of a set of concepts which form a conceptual scheme; the derivation of a set of testable propositions upon the basis of this scheme; and the use of evidence to test these propositions. Upon this basis the original theoretical position is either not disproved or is modified (Denzin, 1970; Osborne, 1996). By contrast, an inductive research starts with the analysis of empirical data and then moves on to the building of theory upon the basis of the data (Strauss and Corbin, 1990). The doctoral project reported in this thesis was intended to assess the impact of Chinese economic reforms after 1993 on the behaviour of state firms. It is clear that the study is concerned more with reaching an understanding of how Chinese state-owned enterprises behave in the new era of economic reform, than with theory building *per se*. As a result, a deductive approach was employed in this research.

Deductive research can be conducted either quantitatively or qualitatively, or a combination of the two. Which approach is employed is determined by the nature of the research topic (Easterby-Smith, *et al*, 1991; Yin, 1994; Patton, 1990; Morgan and Smircich, 1980). Different kinds of research questions should be investigated using different approaches (Brownell and Trotman, 1988). Due to the potential complexity of the interaction between the behaviour of Chinese enterprises and the economic reforms, it can be difficult to identify which is the independent variable and which the dependent variable. Also, the interaction may not be straightforward and could involve various factors that cannot easily be controlled. Although quantitative models provide a picture of trends or relationships, the impact of the economic reforms on a firm's behaviour could be oversimplified if such a methodology was employed as the sole form of analysis. Statistical relationships can gloss over the interesting detail behind causal relationships. Instead, a qualitative approach allows the complexity of the research questions in this thesis to be explored in more depth. Furthermore, Chinese official statistical data are widely considered to be dubious and unreliable (Sherriff, 1999; Dougherty, 2000). Financial data made available at the firm level have long been subject to manipulation (*The Economist*, 7–13 April, 2001). Therefore, a sole quantitative approach to the research, involving either government-level or firm-level data, might have generated inadequate results. With such concerns in mind, a qualitative approach has been employed in this research as the main method, with a supplementary statistical analysis which provides a relative performance of firms under different ownership forms in the CEI. Given that these calculations are based on official data which are vulnerable to manipulation, as indicated earlier, the results should be considered as complementary to the qualitative study reported in Chapters 5 to 9.

Although qualitative research is often criticised as not rigorous, hard to generalise and generating untidy data, it does provide opportunities to gather vivid and dense data that are seen as natural rather than artificial. It is also very flexible and sensitive to new issues emerging during fieldwork (Easterby-Smith *et al*, 1991). If systematically controlled and conducted, qualitative research can lead to rigorous conclusions.

1.2.2 The Time Span of the Study

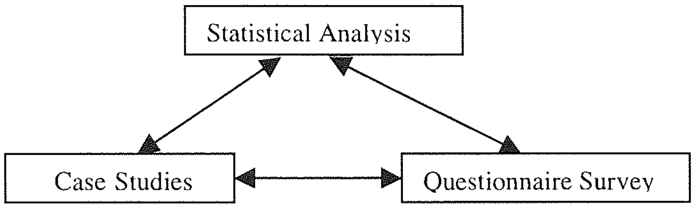
Since the research is concerned with changes in the institutional environment and the management practices of enterprises in the CEI, especially the changes taking place in SOEs, as a result of the new round of economic reform after 1993, it was important to decide on an appropriate time span for this study. Ideally, research on changes overtime should be conducted using a series of follow-up studies across the time period; but this kind of research design is impractical for a PhD project conducted over three years of full-time study. Therefore, instead of conducting fieldwork at different points in time, I employed a strategy of collecting both historical and current data during the fieldwork. Asking respondents to describe situations a few years earlier is open to the criticism that memories may be defective, but 'the clock cannot be put back'. The limitation of human memory is improved in this research by crosschecking data from both a questionnaire survey and face-to-face interviews. Since the study is concerned with economic reforms after 1993, the main study period was set between 1994 and 1999. The research was undertaken between 1998 and 2001 with most of the fieldwork in China conducted in 2000.

1.2.3 The Research Process

The uncertainty surrounding the likely success of the fieldwork had to be taken into account in my research design. In the current stage of China's transitional economy, a large number of SOEs are in serious financial loss, and the deteriorating financial position of many manufacturing enterprises could make their managers reluctant to cooperate with the research. In the face of this potential difficulty, the research design had to be flexible. Generally speaking, the research design included a statistical analysis of official data and a qualitative analysis based on fieldwork. The fieldwork consisted of two parts: a questionnaire survey of firms in the CEI and a series of follow-up, in-depth case studies of particular firms.

This research design provided a methodological triangulation (Smith, 1975) and allowed for the collection of data at different depths and with different focuses (see Figure 1.1). The statistical analysis revealed broad performance results across ownership types within the CEI. The questionnaire survey served to present a general picture of the management practices of firms and an overall comparison of behaviour and structures across ownership types. During the analysis of the questionnaire responses, some uncertainty could arise; some patterns derived from the data might be in contrast to our pre-knowledge; some new trends of behavioural change, which might attract our interest, could emerge from the analysis. Also, some change patterns may be in line with our pre-understanding, but we might still be interested in the process of change and what factors triggered these changes.

Figure 1.1 Methodological Triangulation of the Research



The interview stage permitted follow-up questions to be pursued. In this sense, therefore, the in-depth case studies, based mainly on interviews, can be viewed as a follow-up to the questionnaire survey. However, the important, independent role played by the case studies should not be underestimated. Only the case studies provide an opportunity to look at in detail what really happened in those electronics firms. Insights into the process of change obtained from the case studies are irreplaceable. Therefore, the integration of the questionnaire survey and the follow-up case studies allowed the research questions to be investigated more thoroughly than would have been the case if either research method had been used independently.

The Questionnaire Survey

The questionnaire was designed in October 1999 in English and then translated into Chinese by me (the design of the questionnaire is discussed in detail in Chapter 5). In order to check the preciseness of the translation and the relevance of the questions to the reality of Chinese manufacturing enterprises, Chinese MBA students studying at Aston Business School were invited to complete the questionnaire and comment on it. Although I sent an email to all the Chinese MBA students in the Business School, only those who had work experience in Chinese manufacturing firms were invited to take part. Attendance at the discussion about the accuracy of the translation was on a voluntary basis. Finally, five students came to the discussion: two of them had worked in SOEs, one in a joint venture, one in a joint stock company, and the other in a private firm. All of them had been white-collar employees and one of them had been a senior manager of her company. During the discussion, some translation was modified and irrelevant choices of answers to some questions were removed or replaced by relevant ones.

In total, there were in the questionnaire 31 questions for limited liability/joint stock companies and 27 for firms under other ownership types. The questions were grouped under eight sub-headings, namely general information on the firm, management objectives, organisational structure, Management, internal communication, labour, capital and technology, and inputs and outputs (the questionnaire is reproduced in the Appendix to Chapter 5).

Five hundred firms, of which 194 were SOEs, 148 collectives, 103 joint ventures, 24 joint stock companies, 6 private firms, 11 wholly foreign owned firms and 14 other firms were chosen for the questionnaire survey (the process of sampling and the details of the firms that responded are described in Chapter 5). The sending out of the questionnaire was conducted in December 1999 and follow-up letters were sent in January and February 2000. Despite these efforts, a disappointing response rate resulted. Only 58 usable questionnaires were obtained, amounting to a response rate of less than 12%. However, given the nature of the Chinese society and the reluctance to provide strangers with information, such a response rate was, on reflection, not surprising.

The Case Studies

A preliminary analysis of the responses from the questionnaire survey showed that state firms as a whole remained less market-oriented than non-state firms in the mid and late 1990s. It did not, however, tell us why state firms still lag behind non-state firms in terms of business-oriented behaviour and how changes in the institutional environment, as a result of the new round of economic reform in China, affected the behaviour and management practices of state firms. The following case study work was designed to study in detail what happened in the sample firms in the new economic era. As a result, in addition to the questions asked in the questionnaire survey, the face-to-face interviews with managers of selected firms in the CEI included some open-ended questions to allow the informants to provide more in-depth information on the issue in question. These questions focused on (1) the development process of the sample firm; (2) the external relations of the firm with government agencies, banks and the market; (3) the appointment and remuneration of managers; (4) changes in organisational structure; and

(5) employment practices (the questions used in the interviews is reproduced in the Appendix 6.A).

One variable was controlled for during the sampling: the main products produced by the firms. Firms producing different types of products in China will face different product and factor markets, may suffer the intervention of government agencies to different degrees, and may receive different levels of development priority from the government. As a result, the firms for the case studies were chosen from one sub-industrial sector in the CEI: consumer electronics. Not only does this sub-sector include the variety of ownership required by the research, it has also been the main contributor to the industrial output of the CEI in the 1980s and the 1990s. In addition, this sub-industry is the sector that has experienced the most dramatic market changes, from a sellers' market in the 1980s and the early 1990s, to a buyers' market afterwards (the changes in market situation experienced by consumer electronics producers are discussed in Chapter 4 and in the case studies). By selecting firms from this sub-industry, it was expected, firstly, to reduce the impact of technology on firms' management practices and, secondly, to reveal how the firms under different ownership types responded to the increasingly intensive market competition that occurred in the sub-sector in the 1990s.

Since China is a country large in area, it is more practical to concentrate interviews with firms in one or two geographical locations than scatter the fieldwork across the whole country. The original choice of region for the interview research included North China around Beijing city and Tianjin city, and the South-East of China in Shanging city and Jiangsu province. There were two reasons for choosing these areas. One was convenient access. The other reason was that the regions chosen are two of the areas in China where the consumer electronics industry is concentrated.

A relatively larger interview sample was used than had been originally planned at the outset of the research, to offset the low response rate to the questionnaire survey. Personal visits to firms were conducted during March and May 2000. Altogether 21 firms in these areas were asked to give access; five of them refused. The enterprises that refused to cooperate included one collective in Beijing (this firm had stopped production since 1995), one joint venture in Beijing (the excuse the firm gave me was that the CEO was too busy to agree an interview), one reformed SOE in Nanjing (the CEO was on a business trip at the time I visited and other top managers refused to provide information), one traditional SOE in Shanghai (this firm had been divided and merged with other SOEs), and one joint venture in Shanghai (again, the CEO said he was too busy to be interviewed). Because of a personal relationship, access to one firm in Qingdao and two in Guangdong was also open to me. Fieldwork was conducted in these firms too, to compensate for being unable to access a few of the 21 firms I had first selected. In total, therefore,18 firms were visited. However, one firm in Zhongshang, Guangdong turned out to be a factory attached to an enterprise in Shenzhen. Because it had no right to make major management decisions, the firm in Zhongshang was subsequently excluded from the study.

The details of the remaining 17 firms interviewed are shown in Table 1.2. For sake of anonymity, the names of some of the firms are not given in this thesis. This was required by the firms as a condition for taking part in the research. The definitions of the categories of ownership used in this table and the following text of the thesis are given in Table 1.3.

Most of the data used in writing the case studies came from the face-to-face interviews. Interviews provide 'the opportunity for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience' (Burgess, 1982, p.107). In my fieldwork, semi-structured interviews were used. The semi-structured interview is a data-collecting method based on a set of questions that have been worked out in advance, while providing the researcher with the freedom to modify the questions according to the context of the 'conversation' (Robson, 1993, p.231). It not only allows the researcher to control the whole process of an interview but also provides the interviewee with opportunities to give a description of an episode, a linkage and an explanation (ibid., p.238; Stake, 1995, p.65).

Table 1.2 Details of the Interviewed Firms

Name of firm	Ownership	Location	Informant
Beijing TV Equipment Factory	Traditional SOE	Beijing	Mr Liu, Vice Director
A firm making audio products in Beijing	Traditional SOE	Beijing	Mr Zhao, Director of the President Office
JVC Beijing Industrial Co. Ltd	Joint venture	Beijing	Mr Chen, Vice President
Beijing Peony Electronics Group Co.	Corporatised SOE	Beijing	Mr Fan, President
Tianjin Great Wall (Group) Co.,Ltd	Joint venture	Tianjin	Mr Li, Chairman of the CEO Office
Tianjin Samsung Electronics Co., Ltd	Joint venture	Tianjin	Mr Chen, Vice President, Mr Tian, Vice Head of Personnel Section
Nanjing Hongqi Radio Factory	Collective	Nanjing, Jiangsu	Mr Yang, Factory Director
Nanjing Audio Equipment Co., Ltd.	Corporatised SOE	Nanjing, Jiangsu	Mr Wu, Vice General Manager
Nanjing Panda Electronics Group Co., Ltd	Corporatised SOE	Nanjing, Jiangsu	Mr Shen, Manager of the Planning Dept. Mr Ye, Vice General Manager
A township firm producing Audio-video (AV) products in Jiangsu	Collective	Changzhou, Jiangsu	Mr Qin, General Manager
Shanghai Jinxing Television Ltd	Corporatised SOE	Shanghai	Mr Zhou, Vice General Manager
Shanghai Kenwood Electronics Co., Ltd	Joint venture	Shanghai	Mr Wang, Assistant General Manager, Mr Zhao, Manager of Personnel Dept.
Beijing Feida Electronics Company	Traditional SOE	Beijing	Mr Chen, Vice General Manager
Beijing Jinghai Group Co.	Collective	Beijing	Mr Wang, President
A firm producing Audio products in Guangzhou	Collective	Guangzhou, Guangdong	Mr Liu, Vice President
Qingdao Hisense Group Co., Ltd	Corporatised SOE	Qingtao, Shangdong	Mr Cheng, Vice President
Beijing Yadu Science and Technology Co., Ltd	Corporatised collective	Beijing	Mr Wen, Director, Vice General Manager

Table 1.3 Definitions of Categories of Ownership

Traditional SOEs (the terms unreformed, untransformed and non-corporisated SOEs are also used in the text) 'The Law on Enterprises Owned by the Whole People', which was promulgated in 1988, defines SOEs as a legal person with the state as the sole (or majority) owner. The CMRS is still used in this kind of firm.
Collectives 'The Law on Collectively Owned Enterprises' (1991) defines a collective as a legal person with assets owned jointly by workers and other economic entities. Collectives include a range of firms with different origins. There are collectives established during the pre-reform era, which received production quotas from government agencies, and there are firms called township and village enterprises (TVEs), which are basically firms owned by the community where the firms are located. Finally, there are collectives founded after the economic reforms began and which are not subordinate to any government agencies.
Joint ventures Ventures established by Chinese and foreign business partners. They are subject to the Chinese law and regulations on joint ventures.
Corporatised SOEs (the terms reformed or transformed SOEs are also used in China and in the text below) Companies that are transformed from SOEs under the MES, subject to 'The Company Law' (1993). They are legal persons with shareholders who enjoy limited liability. There are various forms of corporations into which traditional SOEs can be transformed, including joint stock companies, wholly state-owned corporations and other limited liability companies. A limited liability company is established by capital contributions made jointly by between two and fifty shareholders; in the case of wholly state owned corporations, the number of investors can be less than two. The establishment of a joint stock company requires a minimum of five promoters; but where an SOE is a promoter, a minimum of only one promoter is required.

Although attempts were made to interview more than one informant within a single firm, in order to verify the answers within each firm, the top managers of most of the sample firms were not willing to introduce me to other managers. Without instructions from their superior, managers at lower managerial levels of the firms refused to be interviewed. As a result, in 14 out of the 17 firms only one senior manager was interviewed. This limitation must be borne in mind when interpreting the results. However, to limit error, data on the selected firms in other forms were collected, where available. The result was that internal documents were collected from 12 of the sample firms, meeting memos were collected from two of the firms, and articles in newspapers, periodicals and other publications (including *The Yearbook of the Chinese Electronics Industry*) were collected on four of the sample firms. These data were used to verify and complement the information collected through interviews. It was found during the process of analysis that the data from these sources were generally consistent.

1.2.4 Other Issues

In China, many types of firms fall into the category of the MES; there are listed joint-stock limited liability companies, unlisted joint-stock limited liability companies, and other limited liability companies. It is usually very difficult in China to distinguish the ownership forms from the names of the firms. For sake of convenience, in this research the category of limited liability company is used to cover all of these sub-types. This, however, brings about an inconsistency in the classification of ownership in certain parts of the thesis. In the section on the statistical analysis, in Chapter 4, the data used were obtained from the CEI Ministry. Under the categorisation from this data source, the group of limited liability companies consists not only of those corporatised from SOEs, but of those that were transformed from firms other than SOEs. It was impossible from the official data to distinguish between these two sub-types. But in the part of the study concerned with the questionnaire survey, because the firms were asked about their ownership status, these two sub-types could be separated. This permitted further comparisons to be conducted on some management issues. Finally, in the case-study part, the interviewed firms were grouped into collectives, traditional SOEs, joint ventures, and corporatised SOEs. Such a way of grouping facilitates comparisons between reformed and unreformed SOEs, as well as between state firms and firms under other ownership forms. The inconsistency in the categorisation is referred to where relevant in the chapter. It did not, however, have a material impact on my research or my overall findings.

1.3 The Limitations of the Research

The main limitations come from the very concerns on which the research design was based. Firstly, in order to reduce the effect of industry and technology on a firm's management practices, the research draws most of its data from the CEI. This means, however, that the findings based on this industry may not be applicable to other parts of the economy. In addition, given the vast territory and inadequate transport conditions in China, the sample used for the case studies is relatively regionalised. The observations shown in this research may not, therefore, be representative of electronics enterprises elsewhere in China, especially in the less developed regions. Secondly, a few firms that had been approached refused to be involved in the research. At least one of them was known to be in great financial difficulty. Therefore, the final sample may include a disproportionate number of relatively good performers, and this should also be borne in mind when interpreting the results.

In addition to the problems associated with the research design, there are other limitations. One lies in the low response rate recorded by the questionnaire survey. The small number of returned questionnaires made formal statistical analysis impossible and therefore lowered the credibility of the results. Another limitation relates to the statistical analysis in Chapter 4. As mentioned earlier, official data in China may be not reliable, but as these are the only performance data on the CEI that are available in China, the official data had to be used. Moreover, because statistical work in the CEI was standardised very late in China, the data were grouped by ownership in government statistics only from 1993, ruling out a comparison of financial performance across ownership types in the 1980s and the early 1990s. The time period covered when calculating and comparing total factor productivity (TFP) had to be even shorter, beginning from 1995, because this is the earliest year when the data needed to estimate the necessary weights for labour and capital in the TFP calculation became available. Finally, as mentioned already, in most of the firms involved in the case studies only one manager was interviewed. This makes it difficult to check on the reliability of their answers. Information collected from other sources provided a partial remedy to this problem, as mentioned above. This limitation is discussed more fully in Chapter 6.

1.4 The Organisation of the Thesis

This research focuses on the effects of the economic reforms after 1993 on firms in the CEI, especially state enterprises. In the next chapter, the history of the Chinese economy is reviewed. The history is divided into two parts and each period is further sub-divided. The first period begins from the foundation of the People's Republic of China (PRC) and ends on the eve of the beginning of the current economic reform process, in 1978. The second period covers the years after the economic reforms began and the 'open-door' policy was launched. The review serves to set the economic context for the more detailed research into SOEs and other ownership types discussed in later chapters.

The task of Chapter 3 is to set out a theoretical framework for the research. Several theories relevant to understanding socialist economies and enterprises are reviewed and commented upon. Property rights theory and corporate governance theory are used to explore the interactions between firms in the CEI and the institutional environment in which the firms operate. Based on six management and organisational areas identified by Parker (1995a, 1995b), activities within firms, including objectives, organisational structure, management, labour and investment, are studied to discover the impact of changes in the institutional environment on management behaviour and practices in the selected firms.

Chapter 4 first briefly reviews the development of the CEI and then compares productivity across ownership types, using official statistical data. The purpose of this chapter is to provide a general picture of the development of the CEI and to assess whether the more recent economic reforms (including the MES) have impacted on the relative economic performance of different ownership forms in the CEI sector.

Chapter 5 deals with the questionnaire survey and the responses. The results from this analysis are further developed, as explained earlier, through a series of case studies. These studies constitute the following four chapters. Chapters 6 to 9 focus, in turn, on case studies including each of four main ownership types: unreformed SOEs, collectives, joint ventures, and corporatised SOEs, respectively.

Lastly, Chapter 10 sets out the major findings of this doctoral research. It makes a general assessment of the impact of economic reform on SOEs and develops some policy implications. The main finding of this doctoral research project is that the economic reforms after 1993 have so far failed to transform the SOEs (both traditional and corporatised) into commercial entities operating according to market signals, as intended.

2. The Chinese Economy and State Owned Firms Before and After the Economic Reforms Launched since 1979

China's approach towards economic reform is different to that of the former Communist countries of Central and Eastern Europe. Instead of embarking on large-scale privatisation, China continued to insist on the doctrine of the superiority of socialism with a leading role for public ownership. Under the ideology of the 'socialist market economy', while introducing more market elements into the economy, the Chinese government has tried to consolidate the dominant position of the state sector. With GDP growing at an average annual rate of 8% over the last two decades, it seems that the policy stance adopted by China has achieved success. The phenomenal growth and the unique approach China has taken to reforming its economy have been regarded as a reflection of the wisdom of the Chinese people (Wang, 1999).

The difference in the route of economic reform taken by China and the former Central and Eastern European communist countries can be interpreted more accurately, however, as being a result of historical roots and different initial conditions (Tomas and Wang, 1995; Sachs and Woo, 1994; Ma, 1995; Granick, 1990). It is, therefore, important to have a historical view of the Chinese economy in order to understand the context in which Chinese firms operate. This is the main topic of this chapter. The first part of the chapter focuses on the Chinese economy in the pre-reform era, before 1979. The discussion then moves on to the economic reforms launched after 1979, with three particular stages reviewed and assessed.

2.1 The Chinese Economy in the Pre-reform Era

2.1.1 Economic Development in Communist China before 1979

The People's Republic of China (PRC) was founded in 1949 after more than three years of civil war. The new nation showed all the typical characteristics of a backward and underdeveloped economy, with a low level of production and per capita income (Kraus, 1982). Industry output in 1949 was virtually at the same level as in 1935, or 56% of the pre-war peak level (Riskin, 1987). The largest economic sector at that time was traditional agriculture, which employed over 80% of the working population. There were small light industry and handicrafts sectors, but they were of relatively minor importance to the Chinese economy (Kraus, 1982). The heavy industry, most of which was built in Manchuria by the Japanese, was paralysed after the retreat of Japan from China.

After the Chinese Communist Party (CCP) took over the country, the government implemented many measures to reconstruct the economy in a communist manner. In order to reduce the pressure of inflation, which reached its peak when the Nationalist Party left the mainland, the 'People's Currency' (*renminbi*) was introduced and became the only legal tender of the new China. At the same time, the People's Bank of China became the central bank (ibid.). In the industrial sector, the government undermined private firms and increased the state's share in all industrial branches, under the campaign called 'industry reconstruction'. Consequently, at the beginning of the 1950s, a large proportion of the heavy industry became state-run. In the agricultural sector, land reform wiped out the traditional social hierarchy in the countryside and ensured the regime the support of most of the rural population, though at the expense of several million 'class enemies', who were killed (ibid.).

The whole pre-reform period from 1949 to 1979 can be divided into five phases, according to the main events taking place in China. The first phase began in 1949 and ended in 1953, the second was from 1953 to 1957, the third from 1957 to 1965, the fourth from 1965 to 1976 and the fifth covered the following three years up to 1979.

The First Phase: 1949—1953

This phase was a period in which the 'old' economy was reconstructed into a socialist one, characterised by the common ownership of the 'whole people'. The 'industry reconstruction' and the 'land reform' were two important steps to achieving this objective. Land reform proceeded from the summer of 1950 to the spring of 1953, during which all of the properties owned by landlords and the surpluses owned by rich peasants were taken over and redistributed among the remaining peasants and other poor people.

The landlord class was eliminated and inequality of land ownership and operation was greatly reduced (Riskin, 1987, ch.3).

At the same time, socialist transformation of capitalism was carried out in industry, trade and transportation. Almost all of China's industrial enterprises were nationalised, in the form of state-owned firms or joint state-private enterprises. Although there were still some private traders, they were small in scale and minor in importance. The share of state-owned firms in gross value of industrial output (GVIO) during the three-year transformation increased from 34.7% in 1949 to 56.0% in 1952; while that of private business as a whole reduced from more than 60% to less than 40% (see Table 2.1). The remainder of the GVIO was accounted for by the production of joint state-private enterprises. The industry reconstruction resulted in a dominance of state ownership over industrial and other commercial assets, creating a platform for the implementation of a Soviet form of central planning.

Table 2.1 Socialist Transformation in the Industrial Sector: % Distribution of GVIO (excluding handicrafts)

1956	67.5	[illegible]

Source: *Ten Great Years* (1960, p.38).

From 1949 to 1952, the Chinese economy recovered considerately from the distress caused by Japanese occupation and civil war. By 1952, GVIO had grown to two and a half times that of 1949 and the gross value of output in agriculture had increased by one-half (Chao, 1957, p.20). The gross national production in 1952 was 92.34 billion Yuan (at 1977 prices) and the growth rate was 19.3% per annum (Ashbrook, 1978).

The Second Phase: 1953—1957

After nationalisation in the sectors of industry, trade and transport, China adopted the Soviet model of central planning. Under this system, the First Five Year Plan (FFYP) was announced, on 24 December 1952. This plan focused on promoting an urgent industrialisation of China, characterised by an accelerating build-up of heavy industry. Take investment in the sector of heavy industries as an example. 62% of the total state investments during the five years were put into industry departments, compared to only 7.6% to agriculture. Of the total investment of 26.6 billion Yuan that went into industrial capital construction, 24.55 billion Yuan was invested in heavy industries (Riskin, 1987, p.72).

The adoption of the Soviet planning system in China also meant the establishment of a whole set of infrastructure for the implementation of central plans. The State Statistical Bureau (SSB), the State Planning Commission (SPC), the State Construction Commission and the State Economic Commission (SEC) were set up after 1952. Meanwhile, various ministries and local bureaux were established to supervise industrial production, the supply of materials and trade of products. These ministries and bureaux made up a national network that had a great bearing on the development of China's economy from the 1950s and industrial management before and in the early stages of economic reform after 1979.

Generally speaking, the FFYP was successful in the sense of targets being fulfilled. According to official statistics, the actual gross industrial output at the end of the FFYP was 65.0 billion Yuan, compared to the target of 53.6 billion Yuan. GDP increased at an average annual growth rate of 8.3%, from 70.4 billion Yuan in 1952 to 104.7 billion Yuan in 1957 (ibid, p.58).

The FFYP in China is best interpreted as a transferred version of the first two Soviet Five-Year Plans in Stalin's era. However, at the end of the FFYP the Chinese Communist Party split from the Soviet Union. Rejecting the Soviet example, the Chinese government now began to look for its own way to modernisation (Kraus, 1982)

The Third Phase: 1957—1965

After the success of the FFYP the Chinese government announced the Second Five Year Plan (SFYP). However, the original objective of the SFYP - further industrialisation - shifted to an extreme form of economic change. With what can now be clearly seen to be the impossible ambition of catching up with the UK in three years and leaving the USA behind in five, the whole country embarked on a campaign called the 'Great Leap Forward'. Thousands of backyard iron and steel factories were built to support the potential enormous demand for industrial inputs. The result of the Leap was, however, catastrophic. Tons and tons of unusable low-quality steel were piled up at the expense of the abandonment of regular agricultural production (Riskin, 1987). This man-made disaster, together with a harvest failure during the period, resulted in the starvation of over 200 million people (Kraus, 1982).

In the face of the deep depression caused by the Great Leap Forward, the government cancelled the decentralisation reforms initiated at the beginning of the SFYP. A strong central control over the economy was reasserted. In addition, there was a sharp reduction in the capital accumulation rate, a restoration of material incentives and the re-consolidation of executive managerial authority (Lippit, 1987). After Mao's retirement from his position as President of the PRC, an emphasis on the economy over political ideology led the economy to recover slightly. Industrial production, which in 1962 was 22% lower than the level of 1958, increased in 1965 to a level 40% above that of 1958 (US Central Intelligence Agency, 1979).

The Fourth Phase: 1965—1976

The interruption to economic development caused by the Great Leap Forward delayed the introduction of the Third Five Year Plan until 1966. However, the 'Great Cultural Revolution' (GCR), which lasted for ten years from 1966 to 1976, ruined the Third and the Fourth Five Year Plans. The GCR was initiated by Chairman Mao as part of his attempt to regain control over the CCP and the nation after the failure of the Great Leap Forward. The GCR was a political activity designed to revolutionalise people's ideology and, as a consequence, to achieve greater, faster, better and more economical results in all fields of work (Riskin, 1987, pp.186-194). With an overwhelming emphasis on class struggle, remaining capitalists, landlords and the like were virtually eliminated. The joint state-private enterprises were ended, thereby completing the concentration of industrial and commercial property in the hands of the state.

During the GCR the central command system largely collapsed. The State Economic Commission was abolished, the State Planning Commission was abandoned, and the State Council and various ministries suffered a series of reorganisations and mergers. Most of the enterprises that had reported directly to ministries were delegated to local authorities. By 1972, the number of products subject to unified distribution by the central authorities had fallen to 31% of the 1966 level (ibid, p.198).

Within enterprises the power location was intended to shift from the Party committee to the management. There was an urgent call for the establishment of 'strong and independent' systems of management to supervise daily operations and for the enterprise's Party committee to refrain from interfering with routine management affairs. In reality, however, the control over and management of enterprises fell into the hands of the so-called 'Factory Revolutionary Committees' staffed by 'red guards'. Worker participation in factory policies was encouraged, and individual and material incentives were replaced by the ideological requirement for 'redness'.

It is now widely agreed, inside and outside China, that the GCR was another man-made tragedy. Regular production in both the industrial and the agricultural sectors was interrupted by radical class struggle. Although Chinese official statistics showed that during the period from 1965 to 1975 GNP per capita recorded a positive increase, the performance of the national economy was much less impressive than the bare numbers suggested. The official growth rate masks an unknown degree of statistical exaggeration; while the industrial sector produced much useless output because of arbitrary targets (ibid, pp.185-186).

The Fifth Phrase: 1976—1979

After Mao's death and the fall of the 'Gang of Four' in 1976, the GCR was brought to an end. In order to stop the anarchical situation in the country, as had also happened after the Great Leap Forward, the government re-centralised authority over the economy and the society. However, ambitious and impractical economic growth plans similar to those of the Great Leap Forward and the GCR were still present in the new economic policies announced. The Ten-Year Plan announced in February 1978 by the new leader of the nation, Hua Guofeng, set a target for China to reach the 'front ranks' of the world by the end of the 20th century. This plan was criticised by some veteran leaders at the time. After Deng Xiaoping took power, at the Third Plenum of the Eleventh Central Committee in December 1978, Hua's Ten-Year Plan was abandoned and a reform programme for the economy was initiated.

2.1.2 The Economic System in the Pre-reform Period

The economic system in pre-reform China is characterised by two key features: the omnipotent government planning system and the overwhelming dominance of state ownership (Cheng, 1982; Perry and Wong, 1985).

The Central Planning System

After the nationalisation of the industrial, commerce and transport sectors, in the early 1950s, as already mentioned China built a central planning system based on the Soviet model. Like the Soviet Union, China introduced a dual Party-State administrative structure to draw up and implement plans for both industry and agriculture. The main organisation responsible for formulating plans in China was the State Planning Commission. Communications between the commission and regional and enterprise officials were made through an industrial ministry system. The national plans, which formally were highly aggregated, were disaggregated into ministerial and local plans and further into plans at the enterprise level. Located at the bottom of the planning hierarchy, enterprises did not have their own objectives. They served only as instruments for implementing production plans.

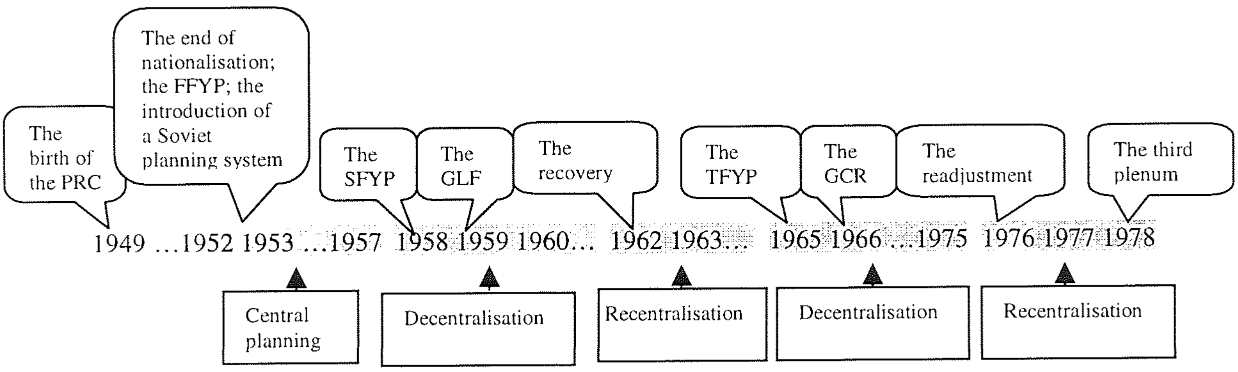
The disaggregation of the national plans was conducted through a process of bargaining between government agencies at various levels. The planning of enterprise production was also a bargaining process with agreements reached over production targets and raw material allocations between enterprises and their supervisory bureaux. The bargaining in planning resulted in a customary practice of this year's targets being set according to the previous year's performance. This provided incentives for enterprises to understate their actual production and to minimise their scope for efficiency gains (Byrd, 1987, ch. 5, cited by Shi, 1998).

Compared with the central command system of the Soviet Union, the planning system in China was far less consistent, in two senses. Firstly, being a big country with insufficient transport infrastructure, China was fragmented into a number of political and economic units. This resulted in a cellular economy (Skinner, 1964 and 1965). In addition, Chinese firms were far more diverse than those in the Soviet Union, in terms of both size and ownership. In the Soviet Union production was concentrated in a relatively small number of SOEs, totalling for example just over 40,000 by 1979. As a result, the size of Soviet firms was usually large. In China, by contrast, factories with over 500 workers accounted for just over 40% of industrial output in the 1970s, and small- and medium-sized factories were far more numerous. Also, in addition to having 83,000 SOEs, China had 100,000 urban collectives and some 700,000 rural collectives by 1978. This diversity in firm size and ownership in the economy resulted in a weaker planning structure in China compared to the Soviet Union.

Secondly, compared with the planning system in the Soviet Union, the Chinese planning system was inconsistent over time. Since its establishment in the early 1950s, the planning structure in pre-reform China had experienced several bouts of centralisation and decentralisation (see Figure 2.1). In recognition of some of the problems of the central planning system, such as product imbalances and shortages, poor quality, lagged plans and a deviation of results from planned targets, reform attempts were launched in 1958, in the form of promoting decentralisation of decision making. After the Great Leap

Forward (GLF) began, the decentralisation initiative ended, with China in anarchy. The years following the Great Leap Forward saw a re-centralisation of the economy. When the Great Cultural Revolution (GCR) began, the central planning mechanism was totally smashed and industries expanded without regard to inter-sectoral relationships. The chaos resulting from the GCR came to an end in 1976 and central planning was reconstructed during the following readjustment period.

Figure 2.1 The Planning System in China in Sub-periods Prior to 1979

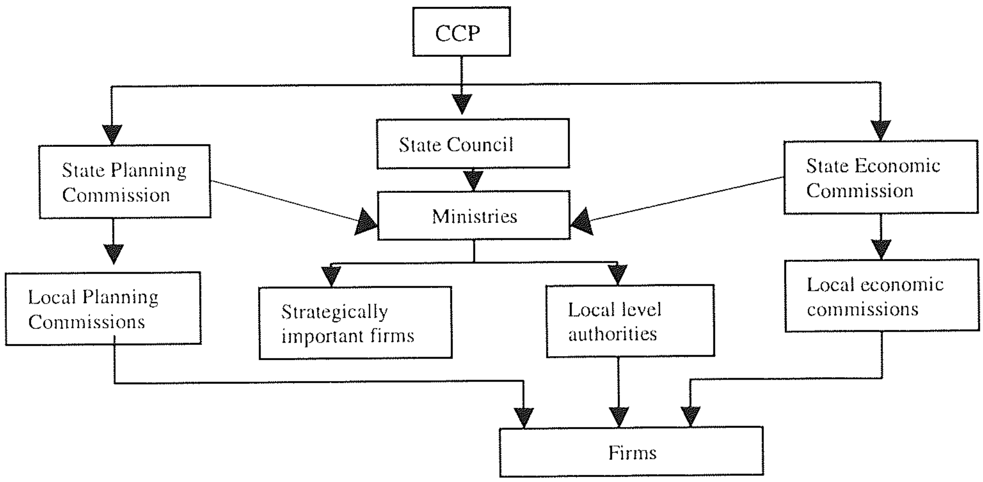


The Industrial Management System

On the eve of the reforms after 1979 the state industrial management system had suffered periods of centralisation and decentralisation and economic and social chaos. Particular problems in the industrial sector during this period were that enterprises were subordinate to too many superiors and that there was a lack of cooperation and specialisation between enterprises (Chai, 1998, ch. 3). State industrial enterprises could be under three systems of control: central, local, and dual (central and local) (Ma, 1982, p.158-9). The number of firms under each system fluctuated during the pre-reform era. In 1978, the number of centrally controlled enterprises, most of which were strategically important such as power-generating firms and military-related enterprises, was less than 2000 or accounted for only 2% of all state-owned industrial enterprises (*The Statistical Yearbook of China*, 1983). By contrast, the much more numerous small- and medium-sized state firms were under either local control or dual control by both central and local authorities.

The hierarchy in industrial management is illustrated in Figure 2.2. Under the ultimate control of the Chinese Communist Party (CCP) were the three top economic organs: the State Planning Commission, the State Economic Commission and the State Council. At the lower level stood various industrial ministries and functional bureaux of the State Council. Under each industrial ministry there were subordinated industrial departments or bureaux. This three-level organisational hierarchy was duplicated on a smaller scale at the local level. Each local authority usually had its own planning and economic commission, functional bureaux, industrial bureaux or general corporations, each in charge of a special branch of industry (Chai, 1998, ch. 3). Strategically important firms were usually controlled directly by related ministries or sometimes even by the State Council. Other firms were under supervision from both ministerial authorities at the local level and other local government agencies.

Figure 2.2 The Hierarchical Structure of Industrial Management in China



Source: developed from Chai, (1998).

This kind of control system caused serious problems. The subordination of state industrial firms to multiple administrative superiors blurred the line of command, resulting in problems of policy inconsistency, inflexibility and evasion of responsibility in decision-making (Liu, 1980). The interweaved structure of control also created a favourable environment for the breeding of departmentalism and localism. It provided administrative agencies, local or ministerial, with opportunities to maximise their own group interests at the expense of the national interests. Materials and products, for example, were channelled within fragmented regions around which transactional barriers were established. Under localism, self-sufficiency was promoted at both the local level and the enterprise level: firms were encouraged to build their own capacity to produce components and other intermediate goods. Consequently, with the intention of establishing self-sufficient localities, duplication of production in different regions was pervasive (Lyons, 1985).

The Enterprise Management Structure

Within state-owned firms there were effectively two lines of power: one in the form of the organs of the CCP, headed by the secretary of the enterprise's Party committee; and the other in the shape of the firm's management, headed by the factory director. The precise location of ultimate power within state firms shifted between these two lines during the pre-reform era.

In 1953 the so-called 'one man management system' was copied from the Soviet Union and became the official norm in China. Under this system, formally the factory director had unified authority over all activities within the factory and took overall responsibility for fulfilling the state plans. The attention of the Party committee was to be focused on political and ideological issues and its official role was to guarantee that the factory's operations were in line with political policies (Brugger, 1976, p.233). Worker participation in factory affairs was encouraged during this period, in the form of workers' congresses. However, the involvement of the congresses in management decision-making was, in practice, limited to welfare matters (Child, 1996, p.36).

When the Great Leap Forward began, administrative control over firms was decentralised. Moral work incentives were given primacy over material ones and the coverage of bonus payments was greatly reduced. Under the watchword of 'politics in command', the power over factory affairs shifted to the Party committee, to which the factory director was made accountable. Meanwhile, mass participation was launched nationwide and workers became directly involved in management issues (Riskin, 1987).

In the following adjustment period, the authority of the factory directors was restored. The Party was distanced from the day-to-day operations of firms, although it remained the most important policy-making body (Lockett, 1983). Mass participation in the management of firms was discouraged, but the role of workers' congresses was extended to discussion and resolution of all internal issues touching on workers' interests. Material work incentives, such as bonuses and piece-rate wages, were re-introduced after 1961.

During the Great Cultural Revolution, workers' involvement in factory issues was taken to an extreme. Hierarchical management was abolished and the Party committees were denied important decision-making. The so-called 'Revolution Committees' were established in all state firms and took charge of the operations of enterprises. Normal production was interrupted by 'class struggle' organised by the Revolution Committees. After the high point of the GCR, in the early 1970s, the Party committee returned to power and management hierarchies were gradually restored (ibid).

In summary, before 1979 Chinese enterprise management underwent continuous change. Authority within firms shifted between the Party committee and the management and the planning system switched back and forth between centralisation and decentralisation. The practice of Party cadres taking authority for the management of firms from the managers, from time to time, had a great impact on the practice of choosing managerial personnel in state firms. When appointing management there was an emphasis on political criteria instead of actual managerial abilities and skills (Bu, 1994).

State Ownership under the Central Planning System

After the industrial reconstruction of the early 1950s, state ownership dominated in the Chinese economy. The share of state-owned industrial firms in total industrial output increased from 56.0% in 1952 to 77.6% in 1978. During the GCR, private firms and joint state-private enterprises were eliminated and many collectives were converted or 'elevated' to the status of locally-managed state firms (Ho, 1994, p.14). State ownership became the only officially-encouraged form of ownership in China.

SOEs under the planning system operated as working units, fulfilling centrally allocated tasks and targets and without autonomy over capital raising and investment. Capital needed for production expansion and other purposes was provided by government agencies, in the form of subsidies. There were no targets for returns on investment, which meant that there was little incentive for management to monitor investment outcomes. Revenue surpluses, if any, were submitted to the state. Other inputs, such as raw materials and intermediate goods, were also allocated by the relevant bureau according to the plans. The output of firms was channelled through a state-owned distribution network, which meant that there was no need for management to develop marketing abilities. Under this system, state firms served simply as production units, responsible merely for transforming given inputs into planned outputs.

The labour system in the SOEs was very rigid and firms had no say over personnel issues. Workers were allocated to enterprises according to labour planning quotas and were then attached lifetime to the firms. There was no freedom for workers to change jobs. Wage rates were determined by a rigid nationwide system, with no regard to the marginal revenue product of labour. When retired, workers were entitled not only to obtain a pension from their works, but to have their children found jobs in the enterprise. The dependence of workers on their firms created a platform for the CCP to control the country, planting socialist ideology and political dogma into passive minds. Meanwhile, state-owned firms, as social units, played the role of communities in what is called 'the iron rice bowl'. In addition to permanent employment, firms provided their workers and families with comprehensive, though relatively basic, welfare provisions, such as housing, health care, and education (Shirk, 1981).

The other element of public ownership in China was the collective economy. In order to accelerate industrialisation collectives were established after 1955. Collectives set up before 1978 also operated under the central planning system and therefore suffered the same problems as those in the SOEs. In the late 1970s, so-called township and village enterprises (TVE) appeared, some of which were created from existing collectives (Byrd and Lin, 1990). In addition, new-style urban collectives appeared in the 1980s, which operated outside the state industrial system described above. Given the highly diversified origins of the collective sector, it is to be expected that there would be heterogeneous behaviour between firms in this sector. This was apparent in the research reported in Chapter 7 below.

Summarising the whole pre-reform era, China registered positive economic growth. The growth rate of net output was estimated at 10% annually for the period from 1957 to 1979 (World Bank, 1983, p.118). However, total factor productivity (TFP) in China's industry may have stagnated during the same period (World Bank, 1983; Chen, *et al*, 1988), implying that the output growth recorded was achieved through a massive influx of productive resources, especially of capital and labour, rather than through a more efficient use of resources. The low productivity of Chinese firms was rooted in the defective planning system and management structures detailed above. But it was not until the late 1970s that Deng and other reformist leaders of the CCP faced up to these problems and launched the reform programme, to which we now turn.

2.2 The Chinese Economic Reforms Since 1979

At the Third Plenum of the Eleventh Central Committee Meeting in December 1978, China's leadership announced a series of important economic reforms. The new policy was initiated as an immediate reaction to the disastrous outcome of the Great Cultural Revolution (GCR) and its aftermath, and with the intention of realising 'four modernisations' - of agriculture, industry, science and technology, and national defence.

Economic reform began first in agriculture. The Householder Responsibility System was introduced to put the emphasis on the provision of incentives to achieve and increase agricultural production. The success of this system in agriculture stimulated the subsequent reform for the cities. Reforming the industrial sector of China was, as realised by China's leaders, far more complex, however. Although in the reform blueprint of 1978 it was emphasised that '[v]italising enterprises, especially the state-owned firms, is the critical stage for the economic reform with its city focus' (The Third Plenum of the

Eleventh Party Congress), the road towards invigorating and modernising enterprises, as independent economic entities, was not ready and had to be built (Tidrich and Chen, 1987; Porter, 1990; Anzizu and Chen, 1991).

The reform of industrial enterprises after 1979 can be divided into three periods. The first period started in 1979 and lasted until 1984. It featured tentative, pilot steps towards granting limited enterprise autonomy and introducing incentive schemes within firms. The second period was from 1984 to 1993, with reform measures characterised by the gradual withdrawal of central planning, the introduction of a dual-price system and the implementation of the Contract Management Responsibility System (CMRS). The third phrase ran from 1993 and continues. It is associated with what is known as the Modern Enterprise System (MES).

2.2.1 The First Stage of Reform: 1979—1984

During the period from 1952 to 1978, capital productivity in China's industrial sector declined and labour productivity failed to improve (Raskin, 1987). The main reasons for the industrial failure, as concluded by Walder (1989, p.408), were overcentralised management, irrational investment decisions by bureaucrats and poor labour motivation. In order to improve the efficiency of the whole economy and particularly that of state owned firms, enterprise reform from the late 1970s focused on delegating more decision-making power to the enterprise level and providing firms with incentives to use resources more efficiently. These reform measures were first experimented with in Sichuan Province in 1979 and then were implemented nationwide at the end of 1980. In this section, the reform measures implemented during this period are reviewed and their effects and problems are addressed.

The Main Reform Measures

The main reform measures in this first period of economic reform involved 'power delegation and profit concession'. Under this state guideline, enterprises were supposed to be given autonomy in decisions regarding their daily operations. At the same time, a bonus system was re-established in state firms through the so-called 'enterprise fund system', which was later developed into the 'enterprise profit retention system' (Lee, 1991, p.32-3). According to this system, enterprises were allowed to keep a certain proportion (no more than 40 %) of profits, although the retained revenues could only have three uses, namely as a development fund for production, a welfare fund for firms' social functions, or a bonus fund for employees' incomes. In any event, the scheme of profit retention was implemented unevenly across industrial sectors and regions. While the retention rates were usually subject to a long bargaining process between state enterprises and the superior authorities. Consequently, the amount of profits kept by firms became not a reflection of their real performance but rather of their bargaining power.

In order to provide firms with incentives to increase outputs, in 1981 a decision was made by the CCP leadership to allow state firms to produce outputs above the planned levels and to generate surplus revenues. Meanwhile, in state firms an economic responsibility system was launched, aimed at controlling enterprise behaviour. In the beginning, the system emphasised profit as the basic performance indicator, but it was soon extended to other performance indicators because price controls made profit an inefficient measure (Chen, 1995, p.60).

In 1981 a limited degree of price flexibility was also introduced for certain products. Firms were allowed to market part of their outputs that the commercial and materials departments did not purchase under the plan (Laaksonen, 1988, p.236). In addition, instead of allocating in the form of subsidies all of the capital needed by state firms, the government began to require firms to secure working capital through bank loans. However, this failed to lead to any fundamental change in the source of capital and the reliance of state firms on the state, because loans were issued by state-owned banks under the order of the central or local government.

With the 'open door' policy being implemented in China from the early 1980s, foreign investment and imported technology were encouraged by the Chinese government. In 1979 a Joint Venture Law was passed and a special economic zone was subsequently established in Shenzhen, where preferential tax policies were implemented to attract foreign investment. Although a prohibition on wholly foreign-owned businesses in China still remained, joint ventures with Chinese SOEs were permitted.

The ban on private businesses in force since the Great Cultural Revolution was, however, lifted. As a result, private sector began to expand, albeit initially on a small scale and mainly in retailing. There were still various restrictions on private businesses in place, such as a limit on the number of employees and on the scope and nature of their operations. Many firms set up during this period which were private in nature therefore preferred to register as collectives in order to escape these constraints and perhaps because of fears that the new tolerance of private ownership might be transitory (Fan, 1988).

The Effects of and Problems with the Initial Reform Measures

Generally speaking, the reform measures in the first phase seem to have had little effect on the performance of the SOEs. Although some authors (for example, Chen, *et al*, 1988; Dollar, 1990) find that the growth rate of total factor productivity in the state sector was higher in the early stage of reform than before 1978, other studies (for example, Jefferson *et al.*, 1992) suggest that the growth rate of productivity in SOEs remained low compared to the non-state sector. This seems to mean that the growth of state firms still relied heavily on the extensive use of factor inputs rather than on a major improvement in efficiency.

The main positive effect of the initial reforms was in the macro economic environment in China. Price flexibility, although limited, was a tentative step towards introducing market elements into the economy. The appearance of private firms, joint ventures and new-style collectives, including TVEs and firms private in nature under the title of collectives, created an atmosphere of more competition in production. It was the non-state sectors that made the most dynamic response to the relaxation of controls in the economy (Boisot and Child, 1988), however; SOEs were still shackled by having to operate within the framework of the mandatory planning system.

The initial reform period saw an enlargement of the decision power of management in state firms and this was associated with a diminishing role for the Party at the enterprise level. Also, a degree of separation of the Party from the government administration occurred (Laaksonen, 1988, p.238). Within enterprises, however, while officially the Party and the management were separated, with an official recognition of the management's authority over the daily operations of the firm, in practice the Party committee often still played an important role in daily decisions. The command line in enterprises remained blurred by a re-emphasis on the worker congresses at that time (Jackson, 1992). As a result, any decision made by an enterprise director could usually be expected to be approved by three bodies within the firm, namely the management committee, the Party committee and the worker congress. The limited autonomy granted to the management of state firms was, consequently, greatly compromised in practice.

In spite of the official enlargement of management autonomy and relaxation of planning controls, there were many serious problems with the reform process in the early stage. Among them were a decline in central fiscal revenues, a further fragmenting of the economy, the irrational expansion of welfare and the duplication of organisational structure at the industrial enterprise and supervisory authority levels.

Fiscal revenues declined sharply after the introduction of the profit-retention scheme. Autonomy granted to firms and permission to obtain surplus revenues from selling 'above-plan' outputs provided state enterprises with a chance to tap revenues that were previously submitted to the government. In addition, the decentralisation of planning and the delegation of control to local authorities enlarged the opportunity for local governments to retain revenues. As a result, the share of the fiscal revenue in GNP dropped sharply from 31.2% in 1979 to about 20% by 1983 (*The Statistical Yearbook of China*, 1985). Of the declining fiscal revenues, only about 6.4% went to the central government and the rest to local administrations.

As mentioned earlier, the complex and interweaved industrial management structure in the pre-reform era caused a problem of departmentalism and fragmentation of the economy. The initial reform measures led China further towards a cellular economy (Naughton, 1987). State firms, government agencies and state banks colluded at the local level. With the increasing dependence of a local government's revenues on the firms under its control, protection for local firms and entry barriers on products manufactured by enterprises outside the region were strengthened. At the same time, local governments put pressure on local banks to issue loans to state firms. The banks complied because they relied on the local authorities for welfare, personnel and even credit volumes (Wang, 1999). The interdependence among government agencies, firms and banks at the local level further fuelled the regionalisation of the economy.

Another problem associated with reform in the early 1980s was the emergence of employee income maximisation. The permission to sell 'above-plan' outputs and the scheme of profit retention caused a rapid increase in disposable funds in the SOEs. Because of the restrictions imposed by the government on the use of such surpluses and the rigid wage system used in SOEs, most of the retained profits were distributed to the employees in the form of social welfare services and bonuses. Large-scale housing construction was observed nationwide (Naughton, 1995) and the bonus bills of SOEs jumped.

The last problem associated with the initial economic reforms was the establishment in SOEs of departments or sections corresponding to the bureaucratic structure of the local authorities (Sun, 1994, p.38). The most important impact of such a duplication on state firms was a further blur of command (Chai, 1998, ch.3). Since these various units in the SOEs were required to report to the corresponding 'upper' bureaux, commands were sometimes issued by these bureaux directly to the units within the firm, without going through to the firm's director. This further weakened management autonomy.

In sum, the result of the economic reforms of the early 1980s was rather limited and there appears to have been little impact on the behaviour of state firms. Although some management autonomies were officially granted and material incentives were introduced, the mandatory planning system remained in place, along with its bureaucratic structures.

2.2.2 The Second Stage of Reform: 1984—1993

This was a period when the economic reforms were expanded in scope and in depth. The initial reform measures were enlarged or modified and, in particular, the profit retention system was replaced by a scheme called 'tax-for-profits'. A Dual-track Price System (DPS) was also introduced, in an attempt to provide firms with incentives to increase both output and profits. In order to separate firms from government agencies, the Contract Management Responsibility System (CMRS) was implemented in state-owned industrial enterprises and some collectives. In this sub-section, major reform measures and changes in the economy during this period are reviewed and commented upon.

Further Enlargement of Management Autonomy

The second stage of reform began with the promulgation of the 'Provisional Regulations on Further Extending the Decision-Making Power of the State Industry Enterprises', by the State Council in May 1984. These regulations gave enterprises decision powers in the following ten areas:

1. Production. State firms now had the right to decide the product mix and output level after fulfilling state plans and orders.
2. Sales. State firms had the right to find their own distributional channels.
3. Pricing. Firms were allowed to set prices for their outputs that exceeded planned targets ('above-plan' outputs).
4. Purchase of materials. Enterprises could choose their suppliers of raw materials.
5. Use of surplus funds. Firms had the right to decide the share of surplus funds used for technological transformation, product development and employee welfare.
6. Disposal of assets. Enterprises were permitted to lease or transfer surplus machinery and other fixed assets.
7. Organisational structure. Businesses could decide the organisational structure of the firm within the authorised size.

8. Personnel and labour. Directors of firms had the right to appoint managerial staff below the level of deputy director, employ workers and reward, punish and even dismiss employees.
9. Payment system. Firms could adopt any payment system in line with state standards.
10. Inter-unit operations. Enterprises were allowed to set up business links with other enterprises, provided they maintained their present ownership status, finances, and subordinate relationships (Laaksonen, 1988, pp.240-241).

Alongside more autonomy officially granted to state firms, there was an affirmation of the senior management's authority over operations. Each firm under the planning system was required to set up a management committee, composed of the director, the secretary of the Party committee, the trade-union chairman, a chief engineer or technical staff and workers' representatives. The power of the Party committee in business decisions was officially reduced, and from then on the two 'hats' of factory director and secretary of the Party committee were rarely worn by the same person (Laaksonen, 1988). However, the influence of Party organs on daily affairs was not eliminated, because the Party within firms was still officially assigned the task of supervising the management. Also, there remained a strong call from the government for managerial adherence to Party principles. In the period immediately following the Tiananmen Square Event in 1989, there was a restoration of the authority of the Party committee in firms, giving Party organs opportunities to intervene more in business and management affairs again. The autonomy that the management of firms now enjoyed was therefore diluted.

The ten decision rights stated in the 1984 Regulations were officially affirmed in the Enterprise Law enacted in 1988. In 1992 a new regulation expanded the ten rights to fourteen. However, these regulations and policies had not been formulated precisely, therefore leaving the determination of most of the matters to a process of negotiation between enterprises and government agencies. Furthermore, administrative interference did not fade away. Instead, intervention by local government was reinforced through the direct involvement in setting out terms of management contracts under the CMRS, discussed below, which was put in place nationwide in the second half of the 1980s. As a result, there were few enterprises that enjoyed all of the autonomies officially granted by the Law and supporting regulations. The two areas that suffered most from administrative intervention were decisions on investment and personnel, especially personnel issues in connection with the appointment of top management and the dismissal of employees (Child, 1996).

The Dual-track Price System (DPS)

According to the 1984 Regulations, firms were allowed to sell above-plan outputs at prices within a 20% range of the state prices. Consequently, a dual-track price system emerged. Production plans continued to be assigned to firms and outputs from production quotas were sold at planned prices, but production above the quotas could be sold at levels higher than the planned prices. This 'two-tier' system was first applied to outputs and later to inputs too. That is, inputs allocated by government agencies at planned prices, which were lower than market prices, were used to produce outputs required under the production quotas; while inputs for above-plan production were secured by firms themselves, usually at closer to market prices. The 20% price ceiling was gradually removed after January 1985, leading to unregulated prices that moved towards market-clearing levels.

At first, this floating price system was applied to agricultural products and consumer goods. Later at the end of the 1980s, planned prices for some capital goods were abolished, while prices for energy and transportation were freed in the early 1990s. By 1993 only 5% of retail commodities, 10% of agricultural goods and 15% of capital goods were still sold at regulated prices (Lardy, 1994, p.11).

The major purpose of the DPS was to provide firms with incentives to expand output and increase profits. It was also potentially an important step towards transforming SOEs into business entities operating according to market signals. However, in reality this system hindered firms from genuine efforts to increase profits through improving efficiency. Since the setting of output quotas and planned prices was, to a great extent, a matter of negotiation between firms and superior authorities, firms found it worth spending enormous time and energy bargaining within government. SOE management pressed for low output quotas in order to maximise outputs sold at market prices, and high input quotas so that there would be more inputs bought at planned prices but then used for above-plan production (Wu, 1993a). The distorted prices created a breeding ground for corruption, which, in turn, was the main fuse of the protests in Tiananmen Square in 1989.

The Dismantling of Mandatory Planning

Alongside the increased role of market prices in transactions was a gradual dismantling of the planning system. Plans assigned to firms began to appear in two forms: mandatory plans and guidance plans. The former were plans that firms had to fulfil, but the latter put no obligations on firms. In the mid 1980s mandatory plans still played the major role in the planning system, but guidance planning increased both in scope and in degree later. In the 1990s mandatory planning was abolished in most industrial sectors, especially for consumer products, and therefore the planning system that had been used since the 1950s unravelled.

With the gradual dismantling of the planning system, the organisational structure of the ministries and bureaux, which constituted the industrial management structure, was streamlined. However, the remaining structure of the state industrial management system was still staffed by hundreds and thousands of professional bureaucrats, who had spent their lives acquiring skills that were now being rendered obsolete by reform (Steinfeld, 1999, p.60). This means that, although the power and ability of these officials to interfere in the economy was diminishing, administrative intervention in state-owned firms tended to continue.

The Tax-for-profits Scheme

In late 1983 the state introduced a system of profit tax to replace profit-retention. This new scheme was intended to transform state enterprises into independent taxpaying units and at the same time secure for government stable revenues (Shi, 1998. p. 39). The programme consisted of two steps. The first step provided that firms should hand over up to 55% of their profits to the state as an income tax; the remaining profits would be shared between the government and the enterprises. The proportional rate differed from case to case. The second step was to adopt an income-tax system with a uniform rate. In addition, an adjustment tax was adopted to compensate for distorted prices. For example, in the late 1980s and the early 1990s, TV set producers in China were required to pay a high commodity-adjustment tax because of the great discrepancy between regulated prices and market prices for TVs in China (Xie *et al.*, 1999).

Under the income-tax system, the retained profits by enterprises decreased dramatically. This was because under the previous profit-retention system enterprises could keep a certain percentage of their gross profits, while under the new system they could only retain a proportion of their after-tax profits. A disincentive to make profits now existed. As a consequence, profits generated by state firms and the government revenues drawn from the state sector both declined dramatically in 1985 and 1986 (Huang, 1990).

Reform of the Earnings System

In the period of the initial reforms, a bonus system was re-introduced in state industrial enterprises to provide employees with material incentives to work. In the beginning, in principle bonuses were limited to 25% of basic salaries, but in practice the actual rate varied across firms. Laaksonen (1988, p.254) found that bonuses in industrial firms ranged from 7% to 50% of basic wages. After income tax was introduced, the government began to collect tax on bonuses as an instrument to control the wildly increasing wage bills.

The official principle of the reform of the payment system was 'the linking of the incomes of workers and staff members with their job performance' (CCP, 1984, p.24). In mid 1984 it was announced that workers and managers in all state enterprises could receive payments above their basic salaries to reward hard work, efficiency and special responsibilities. The salary package of workers was then made up of the basic salary, bonuses and various allowances. In 1985 further wage reform was implemented. In addition to the basic salary, which was graded into eight levels for workers and 14 levels for managerial and technical staff, a new element was added, namely the so-called 'post wage', which was distinguished between administrative-post wages and technical-post wages. The intention of this new composite salary was to link the incomes of workers to the special skills and/or working conditions required by a job.

In spite of these various reform measures, it was still doubtful, however, whether the payment system in the state sector was effective in 'rewarding the diligent and good and punishing the lazy and bad', as intended. A harsh tax on above-norm bonus funds constrained the extent to which bonus levels reflected enterprise profitability. In addition, an absence of any effective and accurate job evaluation or work measurement limited the ability both to relate the basic salary and the specific salary relating to the post to the intrinsic content of individual jobs and to link bonuses to individual performance. Originally designed as an incentive scheme to promote desired performance from employees, bonuses gradually became a normal part of income paid at a fixed level. Meanwhile, the culture of egalitarianism and respect for age and for the father figure in China's traditional paternalistic society (Pye 1985; Lockett, 1988), further handicapped any movement towards relating earnings to individual economic contributions. Overall, the performance-based payment system in the state sector failed to create the desired incentives.

The Contract Management Responsibility System (CMRS)

The most important single feature of the post-1984 reform was the implementation of the CMRS. The system was first experimented with in a number of state firms before being spread to the whole industrial sector in 1987. By 1988, 95% of state-owned industrial firms had adopted the system (Fan, 1994).

The purpose of the CMRS was to increase productivity without changing state ownership, by formally separating the ownership of assets from the management of enterprises. The basic idea was that the government, as the owner of state enterprises, contracted out the right to use the production assets to the enterprises and shared with the firms the revenues derived from them. Under this system, managers of state firms signed management contracts with their supervisory government agencies, outlining the responsibilities, obligations and interests of both of the parties. The system had several variants, but the scheme widely used was the so-called 'two guarantees and one linkage'. Under this scheme, enterprises pledged in the contract to hand over an agreed amount of annual profits that was based on the level of the previous year. In addition, enterprises were required to guarantee to increase asset values and develop technology by an amount agreed in the contract. Once these two targets were met, the total wage bill of the firm was linked to the increase in realised profits and taxes (Shi, 1998, ch.3).

There were some positive effects of the CMRS on state firms. Byrd (1991) suggests six benefits of the system: (1) reorganisation and streamlining of the management team; (2) assertion of independence from the supervisory agency; (3) rationalisation of labour; (4) more responsible investment behaviour; (5) better wage incentives; and (6) more focused managerial objectives and a more business-like orientation.

However, there were also serious problems with the system. Officially, the CMRS was intended to place government at arm's length from the management of state enterprises, thus allowing more decision-making space for enterprise management. In reality, management autonomy was severely constrained by the requirement for firms to work in adherence to performance norms, which were still determined by the government agencies that were directly involved in setting the management contracts. This meant that firms still suffered intensive government intervention (Chen, 1995).

Furthermore, because of the inherent difficulties of the CMRS in defining property rights in industrial assets, state enterprises were reluctant to invest their retained funds for long-term development of the business (Shi, 1998, p.46). Owing to the absence of an automatic mechanism, whereby inefficient enterprises were either closed down or taken over, and to a lack of effective mechanisms of monitoring and control of management, there were pervasive agency problems associated with the CMRS (agency theory is reviewed in Chapter 3). Under the system, state enterprises tended to maximise the short-term incomes of employees, through means such as diverting retained profits from investment to use to fund bonuses and welfare services. In addition, in order to increase retained profits, enterprises bargained with superiors for low profit targets and a low rate of profit remittance to the government. Because of both the bargaining nature of the management contract and the distorted price system, it was difficult to evaluate the actual performance of firms, thereby providing the management with an excuse for poor business performance. Moreover, in practice, managers were made responsible only for profits but not for losses, although the system officially required enterprises to take full responsibility for their performance.

Hassard and Sheehan (1997) summarised seven problems of the CMRS:

—Disparities between enterprises.

—Short-termism.

—Limits to enterprise autonomy.

—Excessive enterprise autonomy or the problem of autonomy without responsibility and accountability.

—Limited improvement in management quality.

—Failure to resolve the problem of property rights.

—Continued social welfare burdens on large enterprises.

In short, it seems that the CMRS had inherent deficiencies. It appears to have failed to improve the economic and financial performance of many state firms. Further reforms were therefore needed to transform their operational performance.

Reform of the Employment System

Workers in the pre-reform era and the early reform period were employed on the basis of a rigid life-time system or the so-called 'iron rice bowl'. In order to tackle the negative effect of this system on labour productivity, in 1986 the government introduced a contract labour scheme, postulating that all newly-recruited workers should be employed on contracts for a fixed period. In addition, largely because of job opportunities created by non-state sectors, a limited labour market emerged (see Table 2.2 for the changes in the number of the urban workforce employed by the state sector).

Table 2.2 Urban Workforce Employed by State-owned Firms 1978-92 (millions of person)

Source: Steinfeld (1999, p.16).

However, the new employment system, like the other reform measures in China, was implemented slowly and unevenly across industrial firms. In Beijing, for example, only about 2% of the whole industrial workforce worked on a labour contract basis in September 1988 (Child, 1996, p.164). The firms in which the new system was most widely used were foreign firms, namely joint ventures and wholly foreign owned enterprises (Forrester and Porter, 1999). In the state sector, the vast majority of employees were still left with 'cradle-to-grave' employment. Although more autonomy over personnel issues was granted to enterprises, management's freedom to lay off workers remained severely restricted (Benson and Zhu, 1999).

Other Changes in the Economy

In 1988 a Bankruptcy Law was passed; but, in practice, there were few subsequent cases of bankruptcy in China and even fewer in the state sector. During the three years from 1988 to 1991, for example, there were only two announcements of bankruptcy of state enterprises (Yu and Ju, 1999). Even when bankruptcy did happen, the common practice was for management and labour to be transferred to other SOEs. This practice consequently reduced the incentive effects of the law on both managers and workers.

Alongside the autonomy over investment decisions, which was officially granted to enterprises, SOEs were now expected to rely mainly on bank loans for capital rather than on direct government grants and subsidies, as in the past. Consequently, the share of total investment financed by the state budget fell from 76% in 1978 to 49% in 1992 (Chai, 1999, p.60-61). In addition, firms were encouraged to raise money from other sources, such as from foreign and other domestic firms or institutions. However, budget constraints on SOEs were still loose because loans issued by banks did not go through rigorous credit-worthiness investigations, but were usually granted under orders of government agencies (Wang, 1999). Because of the decentralisation of the whole economy and the resulting collusion between enterprises, local governments and local branches of state banks, investment projects were often easily approved and bank loans were routinely obtained (Chai, 1999, ch.5). As a result, enterprises were keen to obtain soft bank loans in place of retained funds to finance investment projects. Furthermore, government subsidies did not stop completely. With more and more SOEs falling into financial losses, total subsidies paid by the state in 1992, for example, amounted to 72.2 billion Yuan, of which around 16% went directly to maintain the SOEs (Wu, 1993a). Soft bank loans and continued government appropriations greatly reduced the incentive for the management of SOEs to improve the efficiency of investment and production.

In this second phase of reform, the non-state sector grew rapidly. The most phenomenal growth was recorded by the TVEs. Compared with state firms, TVEs normally had tighter budget constraints, relied mainly on the market for inputs and outputs, and therefore were more responsible for their own performance (Xu, 1991, ch.2). In 1990, they produced 27.4% of GVIO in China (*The Statistical Yearbook of China,* 1991). It has been argued by many researchers (for example, Boisot and Child, 1996; Singh *et al.*, 1993) that the fast economic growth enjoyed by China in the 1980s and the early 1990s was due largely to the activities of the TVEs and other collectives.

Another type of non-state firm that developed quickly during the second reform stage consisted of firms with foreign direct investment. Attracted by the huge potential market of China, low labour costs and favourable tax policies, foreign investment in China increased steadily. From 1979 to 1990, China approved foreign investment in more than 29,000 firms and attracted foreign capital in excess of US$40 billion (*The Statistical Yearbook of China,* 1991). In addition, wholly foreign-owned firms were allowed in

China after 1986. Compared with SOEs, firms with foreign direct investment normally did not enjoy easy access to soft bank credits, but suffered less from administrative interference, employed more standardised business practices and were required to balance their own foreign exchange earnings and expenditures. As a result, they tended to behave responsively to market signals.

The expansion of non-state firms in China not only contributed to the economic growth of China, but facilitated the formation of a market economy. Competition from non-state firms for factor inputs and market shares put the SOEs under pressure, forcing the latter to pay more attention to market forces (Jefferson and Rawski, 1994). However, because of government protection and the continued absence of well-defined property rights (the importance of property rights and institutional arrangements is discussed in Chapter 3), most state firms seem to have responded passively to market competition and were still not well motivated to improve efficiency (Steinfeld, 1998).

Summary of the second reform stage

During the period from 1984 to 1993, economic reform expanded to more spheres and deeper layers of China's economy. It led to the freeing of most prices, the dismantling of central planning, more management freedom and more market competition. It also touched upon the delicate problem of the relationship between government and enterprise management, through the CMRS. However, the deteriorating financial performance of many state enterprises implied that the reforms failed to improve efficiency sufficiently in the state sector. Although some elements of a market economy emerged as the planning system withdrew, several basic characteristics of Chinese SOEs did not change very much (Shi, 1998, pp.43-44). Firstly, SOEs still belonged to or were supervised by at least one government agency, at either the central or the local level, and most effectively suffered continuous administrative intervention. Secondly, factors of production - land, labour and capital - were still allocated mainly through an hierarchical industrial management system, which blocked the flow of resources to their most efficient uses. Thirdly, the existing cellular economy was strengthened by the interdependence between firms, local governments and local state banks. Transaction barriers were established to protect the economic interests of both the firms and the local government. This resulted in insufficient exposure of the state firms to market competition. Finally, social welfare provisions for employees still burdened SOEs, resulting in a large proportion of unproductive assets in the state sector. In short, SOEs were still far from becoming efficient and market-responsive, business entities.

2.2.3 The Third Stage: 1993 onwards

After the Tiananmen Square Event in 1989, the CCP decided to tighten control over the economy. In order to curb economic overheating, finance for construction investment was cut back in order to slow the pace of development. Within the CCP, there was a major debate on whether the achievement of the last ten years of reform should be affirmed and whether economic reform and the 'open-door' policy should continue. The answers to these questions were given by Deng Xiaoping during his tour of South China in 1992. On this journey he declared that economic reform must be carried out even further, deeper and faster. In late 1993 the Third Plenum of the CCP reaffirmed the Party's determination to carry on with economic reform and called for the establishment of a socialist market economy 'with Chinese characteristics'.

In the early 1990s the negative effects of the CMRS became more and more clear. The performance of the state sector as a whole deteriorated and the share of SOEs in gross value of industrial output (GVIO) fell from 64% in 1985 to about 50% in 1992. About half of the SOEs were reported to be operating at a loss. This suggested that the previous reform programmes, which sought to improve economic efficiency by granting autonomy and providing incentives, had failed to revitalise the state sector. The government now recognised that measures which would reform SOEs more fundamentally and permanently were needed. In consideration of the problems associated with the CMRS, the Third plenum of the CCP issued a comprehensive reform plan, intended to 'transform the managerial mechanisms of SOEs and build a modern enterprise system' (Wu, 1993b, p.52).

The Modern Enterprise System (MES)

The official definition of the MES is an enterprise system that has 'clearly clarified property rights, designated authorities and responsibilities, separated government and enterprise functions and scientific management so that it can adapt to "socialised large-scale production" and meet the demands of China's "socialist market economy"' (CCP, 1993). The system has three principles: 'reform', 'reconstruction' and 'restructuring'. Reform is concerned mainly with the property rights of enterprises. Reconstruction refers to reconstructing the assets of firms in accordance with market principles, as a cure for duplicated investments resulting from the poor coordination of economic activities and the cellular economy. Restructuring is related both to building a new industrial management system and to rationalising the organisational structure within state enterprises. With the aim of establishing a permanent and stable enterprise system, the MES is an extension of the earlier reforms of the SOEs. It gives a signal that enterprise reform in China has moved from policy readjustment, through power delegation and profit concessions, to a stage of renovating the enterprise system, revolving around the clarification of ownership relationships (Ma, 1995).

Under the MES, SOEs are to be corporatised into either joint stock companies or other limited liability companies. Initially, 512 state firms were selected for the MES experiment, but the number was increased to 520 in 1995. The choosing of firms for the MES in the state sector is conducted according to a system of quota allocation. The central government sets the total number of firms that are to be corporatised each year and the quotas are then handed down to provincial governments. These local governments decide which firms are to be incorporated. In principle, firms that failed to be selected also have the right to be corporatised, but their applications are more likely to be rejected (interviews with officials of the National Economic and Trade Commission). Of the more than five hundred firms chosen for the MES experiment, those that played a dominant role in their respective industries and those that were considered strategically important were usually transformed into wholly state-funded, limited liability companies. The other enterprises could be reorganised into joint stock companies with non-state shares.

The Development of the Shareholding System in China

The introduction of shareholding as a means of corporatising the SOEs can be traced back to 1986. At that time there was a debate among Chinese economists on establishing a shareholding system among Chinese SOEs. Meanwhile experiments were carried out in a few enterprises. In October 1987, the Thirteenth Party Congress recognised the shareholding system as 'a form of organising assets of socialist enterprises'.

At the end of the 1980s and the beginning of 1990, two stock exchange markets were opened in China, in Shanghai and Shenzhen, respectively. In the beginning, the number of companies listed on the two stock exchanges was small and the state had tight control over what kind of firms could be listed. At the end of 1993, for example, there were only 176 listed companies in China. In November 1991 firms began to be allowed to issue B shares (shares issued to overseas investors) and in 1993 H shares were allowed (H shares refers to the shares issued on the Hong Kong stock market).

When the MES was promulgated at the beginning of 1994, the government stated that from then on the aim of the state enterprise reforms would be the establishment of a corporate system. This was legalised by a Company Law issued in 1994. The shareholding experiment and other enterprise systems were then unified under the MES. In September 1997, the Fifteenth Party Meeting officially decided that the shareholding system was one of the modern forms of asset ownership that could be used in socialist as well as capitalist economies. In December 1998, China enacted a Stock Law to standardise the practices of the stock markets in China.

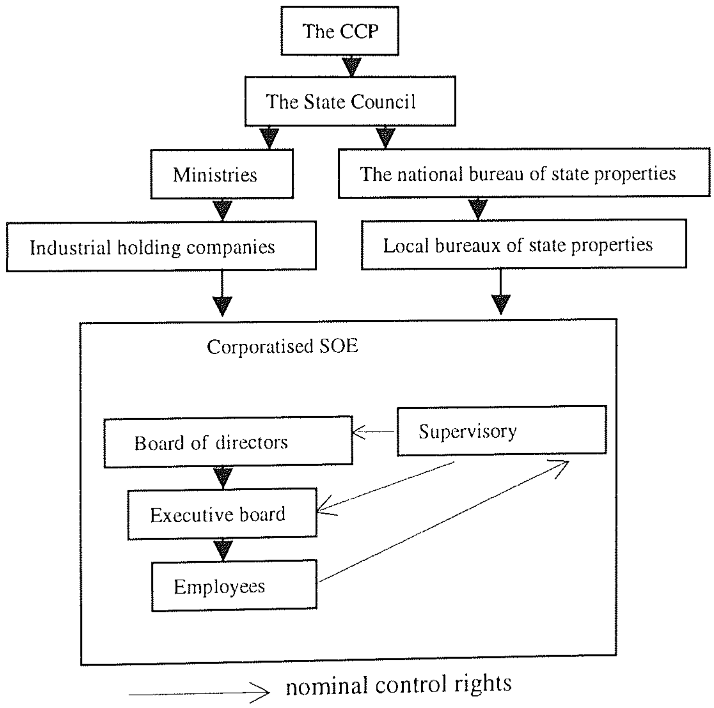
Organisational Reforms

As one of the main themes of the MES, restructuring is carried out both at the industrial management level and within firms. As mentioned before, the industrial management system in China before the MES featured multiple and overlapping authorities over enterprises and continuous administrative intervention. Since the programme of corporatisation began, China has been making an effort to change this rigid and largely defective management system. Experiments were first carried out in the early 1990s in selected regions to separate government functions from the management of firms. In 1992, for example, Shanghai transformed the bureau in charge of local electronics firms into two holding companies, namely the Shanghai Broadcasting and TV Group Holding Company (SHBT) and the Shanghai *Yidian* Holding Company. All consumer electronics firms and firms providing main components to them in this region became affiliates of SHBT, and the other electronics firms operated under the other holding company.

In the late 1990s, the restructuring experiment was spread across China. One important step in this national implementation was the streamlining of the industrial ministry system, from 1998. The number of ministries and commissions was greatly reduced by way of mergers and at the local level industrial bureaux have been slowly transformed into industrial group corporations, like those introduced earlier in the Shanghai electronics sector, serving as holding companies. Meanwhile, another line of authority has been established in order to safeguard the state assets in joint stock companies. This is the 'state administration of state property', which is supposed to operate as an agent on behalf of the 'whole people' (Broadman, 1999). This property management administration is composed of a national bureau at the top and agencies at local levels. The network of the administration of state property is now embedded in the industrial management system described earlier, alongside the ministry hierarchy and the network of economic commissions at various government levels.

Within enterprises, structural changes have also taken place. Copied from the organisational structure of modern enterprises in Anglo-American counties, it is now required that a board of directors is established in every corporatised SOE. In order to reflect the role of employees as an owner of the enterprises and to encourage employee participation, a supervisory board, adopted from the German model of large-enterprise governance, has been introduced into Chinese joint stock companies, alongside the main executive board. The supervisory board in a joint stock company usually comprises of the chairman of the trade union, head of the audit department and representatives from shareholders. As its name suggests, officially the main function of the supervisory board is to examine the company's financial affairs and supervise directors and managers, to see whether they violate laws, regulations or the company's articles of association (see Figure 2.3 for the management structure of reformed SOEs). However, some studies (for example, Tam, 1999; Zhang, 1996) has pointed to problems with the supervisory board. Because of a lack of incentives and resources, this body seems unable to perform its functions properly. Except for the resemblance in name to the German model, it has been suggested that so far the supervisory board in China has not played an active role other than to provide another organisational layer (Tam, 1999, p.86).

Figure 2.3 The Management Structure of Corporatised SOEs



Financial Reforms

Financial reforms began earlier in the 1980s and featured the substitution of bank loans for government grants. However, loans at that time were issued by banks under government orders, as already discussed. According to a survey of 123,900 state firms, for instance, the average ratio of liabilities to assets was 75.05% (Huang, 1998); while another study shows that about 60% of the liabilities of state firms came from bank loans

(Wang, 1998). When the performance of state firms as a whole deteriorated in the late 1980s and the early 1990s, unpaid loans began to threaten the stability of China's entire banking system.

In 1994, reform of the banking system deepened. The main thrust of the reforms after 1994 was the strengthening of the central bank role of the People Bank of China and the commercialisation of China's banking system (Chai, 1998, ch.7). In addition, in order to bring more competition to the banking market, private banks, urban credit co-operatives and even foreign banks were now allowed to operate in China.

The process of transforming Chinese state banks into independent creditors that have the right to choose to whom loans are issued, is frequently interrupted by special campaigns organised by the government, however. For example, in the second half of the 1990s the government launched a new round of technology transformation, as an extension of that in the 1980s. In this campaign, the banks were ordered to issue loans to selected firms at interest rates lower than the normal level or even without interest at all. The government would pay the banks the discrepancy between the normal interest level and those used in the campaign. This cost the government 15.3 billion Yuan in 1999 (interviews with officials of the National Economic and Trade Commission). Which firms were entitled to this kind of loan was decided by local governments, after they received quotas from the central government. It is, therefore, very likely that the allocation of quotas and the choosing of firms became another bargaining process, both between central and local governments and between enterprises and the local authorities.

Other Reforms at the Third Stage

Reform of the employment system was deepened in the third phase of reform. Although the contract employment system was introduced in the late 1980s, the implementation afterwards was very slow. In order to standardise employment practices, a Labour Law was issued in 1994 and put into effect early in the following year. This law required that all employees in firms should work on employment contracts. The durations of the contract would vary according to the period the worker had been employed in the enterprise. Anyone who had worked for at least ten years in a firm, or who was less than ten years away from retirement, had the right to sign an employment contract with a non-fixed term. All other employees would work on fixed-term contracts. The exact duration of employment contracts can be decided jointly by the employer and the employees (interviews with an official of the Economic and Trade Commission of China and with managers of the firms chosen for the case studies reported in chapters 6 to 9).

As part of the campaign of restructuring, the 1990s saw large-scale labour redundancy in Chinese firms. Under the call from the government to rationalise the workforce, most firms in China, especially the SOEs, laid off surplus labour, on a scale ranging from industry to industry, from region to region and from firm to firm. The resulting large-scale unemployment caused social unrest. Stories of suicide committed by laid-off employees and the murder of some SOE managers by redundant workers have circulated in China, although official media have tried to avoid reporting such incidents. In spite of massive labour layoffs in the Chinese state sector, however, it is still reported that most state firms are overstaffed, by between a third and a half (*The Economist*, April 7th-13th 2001). Nevertheless, the fear of social instability appears now to have slowed down the pace of labour streamlining in state firms.

Reform of the social security system was also carried out in the second half of the 1990s, with the objective of freeing firms from the heavy burdens of social welfare. New schemes were launched in four areas, namely pensions, medical services, housing and unemployment relief. Instead of covering all of the expenses of social welfare provision, firms are now only required to set aside a certain percentage from the salaries of employees to fund pension, medical and unemployment insurance and housing. The principle behind these schemes is to pool funds for social welfare provision from the firm, the employee and the state. Under the new social security programmes, the retirees now obtain their pensions from the state and medical expenses should be shared between the employer, the employee and the government; although the exact arrangements for sharing the cost have yet to be worked out. Housing allocation by firms is to be stopped and employees are to be required to buy the allocated apartments using the funds pooled by the firms and the employees, under a scheme of public-housing funding. The exact percentage of employees' salaries contributed by firms to these funding pools may differ across regions and firms (Yang, 1999).

2.3 Summary

China adopted a central planning system on the Soviet model to manage its economy in the early 1950s. The central planning system contributed to the establishment of heavy industries in China, but the defects of this system soon became obvious. In the late 1950s, decentralisation took place as a remedy to the problems associated with the central command system, but this turned into the catastrophic Great Leap Forward (GLF) later on. During the following readjustment period, central planning was reintroduced to curb the economic chaos caused by the GLF. The process of decentralisation and re-centralisation was repeated during the Great Cultural Revolution (GCR), from 1966 to 1976, and the immediately following period.

Alongside this alternation between decentralisation and centralisation in the planning system, Chinese state firms operated under a defective industrial management network. This network, characterised by unclear lines of command and overlapping authorities, appears to have caused serious problems of inconsistency, inflexibility and evasion of responsibility in managerial decision-making. It also seems to have resulted in economic localism and fragmentation, which still has far-reaching effects on the structure of the Chinese economy.

In the face of the disastrous effects of the GCR and the failure of the central planning system to modernise the economy sufficiently, the CCP launched a series of economic reforms from 1979. The reforms, providing a possible blueprint for the transformation from a socialist command to a 'socialist market economy', were adopted gradually. Reform began in agriculture through the implementation of the Household Responsibility System and later spread to the industrial sector. Initial industrial reforms included the introduction of profit-retention and the granting of some management autonomy. The intention of these measures was to revitalise the SOEs. However, the reform programmes caused a sharp fall in government revenues and had a disappointing impact on performance at the enterprise level.

A tax-for-profit system was implemented in the second phase of reform from 1984 to replace the profit-retention scheme. A dual-track price system was also introduced, intended to provide firms with incentives to increase output. Prices of commodities began to be freed. In the 1990s, most remaining price controls were abandoned and most commodities were then transacted at market prices. The most important single reform measure in this second stage of reform was the introduction of the Contract Management Responsibility System (CMRS). This system was intended to separate the ownership of SOEs from their management. However, government intervention did not stop. Rather, it seems that the CMRS unintentionally created more grounds for administrative interference. In addition, the CMRS appears to have brought about severe problems of short-termism in management decision making because of the continuation of ambiguous property rights over the industrial assets and a lack of effective governance mechanisms to check agency problems in the management of SOEs. Generally speaking, the reforms in this period proved to be transitional in nature.

After 1993 China entered its third phase of economic reform. The problems of the CMRS were recognised and a new reform measure, called the MES, was introduced. The new system is intended to transform the SOEs into corporations with more clearly defined property rights and designated authorities and responsibilities. So far restructuring has taken place in both the industrial management system and at the firm level. Industrial bureaux have been condensed and some have been transformed into industrial holding companies. The bureau of state property has been established to manage the assets of state corporations. Within corporatised firms, boards of directors have been set up to be the highest decision-making body. In joint stock companies, a supervisory board has also been established with responsibility to monitor the board of directors and the executive board.

The second half of the 1990s also saw the deepening of financial reform, the introduction of new social security schemes and massive labour redundancy in state firms. The aim of these programmes has been to create an environment more conducive to state enterprises acting as independent business entities, responding to market signals. However, it appears that problems with the SOEs still remain and, in particular, their performance as a whole is still unsatisfactory, reflected in continuing financial losses recorded by about two-thirds of Chinese state firms.

In the next chapter a theoretical framework is developed for the analysis of state enterprises in this thesis. Chapters 4 to 9 then present the empirical work. Chapter 4 compares the performance of state firms in the Chinese Electronics Industry (CEI) with that of the non-state firms, based on an analysis of Chinese official statistics. Based on my fieldwork conducted in the early 2000 in China, Chapters 5 to 9 report the results of a questionnaire survey and interviews with 17 selected firms in the CEI. The aim of the empirical work is to assess the impact of the economic reforms in China after 1993 on behaviour and practices in Chinese state firms, through a comparative study of a sample of enterprises in the CEI, some of which have been corporatised. The reasons for choosing firms the CEI for study were given in Chapter 1, above. Some studies (for example, Broadman, 1999; Zhou and Zhang, 1999; Xu and Wang, 1997) have already cast doubt on whether the latest reforms will transform behaviour in state firms, leading to improved economic and financial performance. Some of these studies focus on the policies related to the new reforms, pointing to an inconsistency between the reforms' intentions and the measures used (for example, Broadman, 1999). Some analyse financial performance of listed companies using data obtained from the two Chinese stock exchanges. Few have assessed the impact of the latest reforms through studying external relations and internal management practices of state firms in the new reform era, however. Therefore, arguably there is a need for a further and more detailed analysis of the impact of the reforms. This is the purpose of this thesis.

3. Formulating a Theoretical Framework: a Review of Relevant Literature on Ownership and Enterprise Performance

3.1 The Purpose of the Chapter

There are a lot of studies of socialist economies, and research in this area has increased dramatically since some former Communist countries embarked on their transition from central planning to a market economy. China, in particular, has attracted worldwide academic attention since the commencement of its economic reforms and the open-door policy in 1979, not only because of their potentially vast effects on world trade but because the route of China's transition is different from its former Eastern and Central European Communist counterparts.

The study presented in this thesis is intended to assess the effects of the new round of Chinese reform after 1993, especially the Modern Enterprise System (MES), through comparing reformed SOEs with unreformed ones, as well as state firms and non-state ones. The central research question addressed is whether SOEs have been transformed into independent commercial entities operating according market signals, as intended. In order to address this question, a theoretical framework needs to be presented, which is relevant to understanding the discrepancy in behaviour among firms with different ownership forms, as well as the variety within a single ownership type.

The main purpose of this chapter is to present a theoretical framework for analysis of the reform of China's SOEs. First, in this chapter some theories critiquing socialist economies and socialist state-owned firms are reviewed. These critiques of socialism are helpful in understanding the nature of the system and general problems with socialist state ownership. Next, some general economic theories which are relevant to understanding socialist economies and enterprises are reviewed and commented upon. These general economic theories reviewed, all belonging to the so-called 'institutionalism', include North's institutional theory, which is arguably essential to understanding the basics of institutional economic theories; property rights theory; public choice theory and corporate governance theory. Later in this chapter, necessary parameters for a research framework that are relevant to the research questions of this doctoral project are drawn from some of the reviewed theories. Based on these parameters, my own theoretical framework is presented.

In this Chapter, 'socialism' refers to the system established by the Communist Party after it took power, for example, in China in 1949. The terms 'socialist' and 'communist', and 'socialism' and 'communism', are used interchangeable in this thesis.

3.2 Theories Critiquing Socialist Economies

In this section certain theories critiquing socialist economies and socialist state ownership are reviewed. These theories help provide a general understanding of the nature of and some major problems with the socialist system in general and the Chinese socialist economy in particular. Section 3.2.1 focuses on critiques of socialist calculation, which is the basis of central planning. In section 3.2.2, Kornai's theory of the socialist system, which is based on the experience of socialism in some communist countries, is reviewed and commented upon.

3.2.1 Critiques of Central Planning and Socialist Calculation

Contrary to a market economy, where individuals or individual organisations make their own economic decisions according to market signals, socialist economies are built upon the Marxist belief that centralised decisions, made by a single individual or a single planning body, can better co-ordinate the demand and supply of a society. What is left to individuals is to behave according to the planning quotas. Therefore, solutions to problems in a socialist economy lie, as believed by communist advocates, in calculations of inputs and outputs of a purely technical nature.

Critical of this logic, a lot of Western economists have developed theories to show why, in the real world, this kind of technical calculation fails to deliver what the advocates of socialism expect. Two lines of enquiry are reviewed in this sub-section: one is based on Hayek's Dispersed Knowledge Theory and the other consists of studies focused on the role played by 'value' in economic calculations.

According to Hayek (1945), the problem of information is something everyone has to face when making rational economic decisions. He addressed his comments towards economic planning at the macro-economic level when he wrote:

> 'The real central problem of economics as a social science...is how the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs...which could be brought about by deliberate direction only by somebody who possesses the combined knowledge of all these individuals' (Hayek, 1948, p.79)

An efficient economic system has, therefore, to be so designed that information or knowledge of a particular circumstance of time and place, which is initially dispersed among different people, is best utilized. According to Hayek, information of a specific-to-time-and-to-place nature loses its accuracy and relevance when entering statistics used by a central authority for planning. Following this line of reasoning, socialist calculations inevitably become inefficient. Instead, decisions should be left to the competitive market and "the man on spot" who knows the best about his/her specific circumstance. Hayek and some other economists (for example, Hurwicz, 1973; Mises, 1935) argue that the task of co-coordinating numerous decentralised plans is done successfully by the logic of individual free choice and the process of market pricing.

Another line of reasoning for the mismatch between the means used by socialist economies - central planning - and the desired end, the more efficient allocation of resources than that achieved under capitalism, focuses on the basis used for calculation - 'value'. This line of enquiry is complementary to the Dispersed Knowledge Theory because both criticise the unscientific (in terms of social science) foundation of socialist calculations.

According to this line of argument, put forward particularly by Mises, the objective exchange value of commodities that reflects their relative scarcity should enter any rational economic calculation. Only with this kind of value being taken into account can resources be employed in their most efficient uses (Mises, 1935). In a socialist economy, where market transactions are exceptional, this kind of value is stripped away from commodities and prices are set arbitrarily. However, and importantly, the practical problem of value does not disappear in a socialist economy, even if the market solution to the problem is ruled out - it remains in its entirety (Pierson, 1935). Failing to recognise the role played by exchange value in economic decisions, according to this critique, it is impossible for a centrally directed economy to make any rational calculation (Brutzkus, 1928). Mises further argues that there cannot be an economy without rational calculation, and that 'hence, in a socialist state...there can be...no economy whatsoever [because] [t]here would be no means of determining what was rational' (Mises, 1935, p.105).

Different from this approach to value, which is based on market exchange, the Marxist labour theory of value argues that values are determined by the average socially necessary labour time taken for production. That is, the value of a commodity is determined by '*the quantity of labour* worked up or crystallised in it, [which is] necessary for its production in a given state of society, under certain social average conditions of production, with a given social average intensity and average skill of the labour employed' (Marx, 1968, p.205). Marx argued that prices of commodity should therefore reflect the *average socially necessary* labour time taken for production. In addition to other objections to Marx's device of prices of production, the debate has since centred on whether or not labour values can logically be transformed into prices in socialist economies. This is the so-called 'transformation problem'. Some economists question whether in reality there is sufficient information in a socialist economy to calculate the desired results. For instance, Mises (1935) and Halm (1935) argue that, with the different qualities of labour and the variety of the natural conditions of production, the calculation of value in a socialist economy yields absurd outcomes.

3.2.2 Kornai's Political Economics of the Socialist System

The last subsection discussed some economic theories that criticise the foundations of socialist central planning, calculation and value. In this subsection, a classic theory regarding problems with the operation of the socialist system is reviewed. This is

Kornai's political economics of the socialist system (Kornai, 1992). Based on practices of socialism in communist countries, Kornai's theory identifies some major problems embedded in socialist economies and potentially provides important insights into the socialist system and state ownership.

The Power Structure and Property Rights in a Socialist Economy

According to Kornai, one of the main characteristics of the socialist system is a unitisation of, or the blending of, the political and the administrative functions. This creates an indivisible, totalitarian power structure. Alongside such a power structure is the dominance of state ownership. Kornai argues that the expression used in socialist societies, 'property of the whole people', is merely ideological in nature and does not clarify the real property relations that subsist in socialist state-owned firms. In a firm that is owned virtually by all of the people in the society, no one can pocket the profits and no one need pay out of his/her own pocket for any losses. The result is a depersonalising and elimination of property rights (for a more detailed discussion of property rights see sub-section 3.1.4 below) (Kornai, 1992, ch.5). Therefore, state assets 'belong to all and to none' (ibid., p.75). In this sense, it can be said that there are no property rights at all in a socialist economy (Steinfeld, 1998).

Bureaucratic vs. Market Co-ordination Mechanisms

Kornai also explores the co-ordination mechanisms used in capitalism and socialism (Kornai, 1992, ch.6). In a capitalist economy, with private property rights, transactions are conducted under the price system. But in a classical socialist society, almost every economic activity is bureaucratically co-ordinated. Kornai argues that bureaucratic mechanisms, which are most widely and forcefully used in socialist economies, are another set of features important for understanding the problems embedded in a communist system. The following table, developed from Kornai (1992, pp.97-103), contrasts the bureaucratic and market mechanisms.

Table 3.1 Bureaucratic Mechanism and Market Mechanism

Bureaucratic mechanism
*Vertical, asymmetrical, superiority-subordinate type relations among economic participants.
*The superior is not chosen by the subordinates but is appointed over his/her head.
*Vertical flow of information in the form of commands and orders.
* Non-material motivation for subordinates to carry out commands, i.e. to win the superiors' approval, to receive the reward offered and to avoid the penalty threatened for non-compliance.

Market mechanism
*Lateral or horizontal linkages between a buyer and a seller.
*Equal rank between transaction participants in legal terms.
*Price as the most important flow of information and voluntary contracts among market participants.
*Material gains from transactions as the most important motivation (private property rights).

Source: developed from Kornai (1992): pp.97-103.

According to Kornai, in a socialist economy, where bureaucratic co-ordination prevails, what is produced, how it is produced and for whom it is produced are not determined by 'the vote of money', but by central plans. The 'natural selection' of market competition is not the determinant of the 'life or death' (Kornai, 1992, p.115) of a firm. Instead, the firm's destiny is under the control of the state bureaucracy. Kornai and some other economists (for example, Harding, 1981) also argue that, in socialist economies, not only are the external relations of firms bureaucratically coordinated, that the same vertical system of linkages is also applied down to workbenches within the firms. As a result, with the Party at the apex of the pyramid and citizens who hold no function in the apparatus at the base, a continuous, vertical chain of relations, without major upward feedback, stretches from top to bottom in the economy (Kornai, 1992, ch.7).

Investment Hunger and Soft Budget Constraints

According to Kornai (1980, 1992), bureaucrats have a strong inner drive for production expansion. This drive derives from the belief that they can soon catch up with the developed countries by virtue of the superiority of the socialist system, and from military and defence considerations. Kornai points out, however, that it is not the effort of expansion itself, but the degree of internally generated self-restraint which runs counter to the drive that distinguishes socialism from capitalism. In line with Kornai's argurment, Qian and Xu (1991) maintain that, without real owners of any state assets because they are owned by 'all the people', there is an almost total absence in a classic socialist economy of internal self-imposed restraints that might resist production capacity expansion.

Kornai's concept of 'soft budget constraints' refers to the relaxation of the strict relationship between earnings and expenditure, when firms expect that some other institution, typically the state, will pay for their excessive expenditure in the forms of 'soft taxation', 'soft subsidies', 'soft prices' and 'soft credits'. Some economists who believe in Kornai's theory of soft budget constraints (for example, Qian, 1986; Qian and Xu, 1991) argue that, under soft budget constraints and facing an almost vertical demand curve, state-owned firms have very weak price responsiveness. That is, there is no need for the managers of state firms to consider the amount of output against the restraints imposed by the costs of inputs: such a numerical calculation has no rational economic meaning to them. According to Kornai, the regular, pervasive presence of soft budget constraints in a socialist economy is closely connected with the undivided power of the Communist Party, the dominance of state ownership and the pervasive use of bureaucratic co-ordination mechanisms; or in other words, the appearance of soft budget constraints is 'deeply rooted in the basic traits of classical socialism' (Kornai, 1992, p.144).

Although a simple concept, soft budget constraints have profound implications for socialist SOEs in terms of allocative and X-efficiency. Many studies (for example, Chen, 1998; Steinfeld, 1998; Jefferson, 1998) have used this concept as a tool for examining state-owned firms in China. They argue that state firms in China do face much softer budget constraints than enterprises under other ownership forms, which in the past were usually considered by the Communist Party to be peripheral and supplementary to the economy. Even when more and more elements of a market economy have been introduced into China's economy, in the course of the economic reforms since 1979, state firms have remained dependent greatly on government agencies for capital. The notion of 'soft budget constraints' also provides practical policy implications for tackling some of the problems of socialist state-owned firms, through studying the role of the Communist government and state banks in financing state firms (Steinfeld, 1998; Jefferson, 1998).

The Main Line of Causality in Kornai's Theory

Kornai (1992) argues that the root of a variety of problems associated with a socialist economy lies in the undivided power of the Communist Party and official communist ideology. Next comes the dominance of state ownership, which, combined with the first elements of the causality chain, brings about the dominance of bureaucratic co-ordination mechanisms and the pervasiveness of soft budget constraints in the economy. At the most outer layer of the causality lies a variety of phenomena, including forced growth, a chronic shortage economy and the co-existence of labour shortages and unemployment. Based on this line of causality, Korani maintains that the closer a change is to the beginning of the causal chain, brought about by economic reform, the more significant that change is likely to be. In other words, it is unlikely that changes in the more outer layers can be sustained without the problems of the inner layers being tackled first.

In addition, Kornai (1990, 1992) argues that certain property forms are capable of combining with certain co-ordination mechanisms. There is a natural affinity between private ownership and market mechanisms, and so there is between state ownership and bureaucratic co-ordination. If Kornai is right, any attempts to combine public ownership and market mechanisms will prove to be fruitless because they are incompatible.

By using such a line of reasoning, Kornai integrates a variety of his arguments about the socialist system into a coherent theory of the political economy of communism. This theory not only presents a comprehensive understanding of classical socialist economies, but also provides important insights into the process of economic transition taking place in China and most of the former Communist countries of Central and Eastern Europe. By pointing out the affinity between certain property forms and certain economic co-ordination mechanisms, Kornai's theory stresses the importance of combining private property with market mechanisms. This line of argument suggests that reform efforts that fail to replace bureaucratic co-ordination with market mechanisms, for example, in the process of privatisation, tend to be fruitless (Steinfeld, 1998). In addition, by identifying the identical role of co-ordination mechanisms in both the external and internal relations of a firm, Kornai's theory establishes a linkage between the macro-economic environment and enterprise behaviour.

The critiques of socialist economies reviewed above provide a theoretical foundation for an understanding of the nature of socialist systems and the problems of state ownership in particular. Also, there are some other economic theories that may be relevant to an understanding of socialist economies and enterprises. In the next section, some institutional theories, which have recently been widely used to study socialist economies, are reviewed and commented upon.

3.3 Institutionalism

Applicable to both market and non-market economies, institutional economic theories have gained strength in the study of economic problems and phenomena in socialist and post-communist societies in recent years. The institutional perspective is a wide and rich subject that has been developing in divergent ways. These somewhat divergent economic theories, however, agree on the importance of institutions in determining individual economic activities. They also tend to use as a basic theoretical block some common concepts, such as 'transaction costs', 'contracts' and 'information asymmetry'. In the next subsection North's theory of institutions is reviewed, which is arguably central to an understanding of the basics of institutional theories. After that, two connected streams of institutional theories that appear most relevant to understanding socialist economies and state enterprises are reviewed.

3.3.1 North's Theory of Institutions and Some Basic Concepts in 'Institutionalism'

North's Theory of Institutions and Institutional Change

Although there are a lot of important theories of institutions, North's theory provides a powerful framework to explore the interactions between institutional arrangements and economic organizations, i.e. how established institutional constraints shape economic activities of transaction participants; and how institutions change in response to individual choices and strategies. Although it is not involved directly in the analytical framework of this doctoral research, North's theory enables a better understanding of the theories that are reviewed later in this chapter and which form the theoretical framework.

According to North, institutions are 'the rules of the game in a society or, more formally, as the humanly devised constraints that shape human interaction' (North, 1990, p.3). Providing a structure to everyday life and a guide to human interaction, institutions limit the set of individual choices and reduce uncertainty. North identifies three elements of institutional constraints: formal constraints, informal constraints and enforcement. Formal constraints refer to explicit political rules, economic rules and contracts. Informal constraints are those derived from culture and social practices and therefore do not change immediately in reaction to changes in the formal rules. The third element of institutional constraints, enforcement, can be self-enforcement with compliance and, more third-party enforcement. Third-party enforcement involves a neutral party with the ability, costlessly, to measure the attributes of a contract and to enforce agreements such that the offending party always has to compensate the injured party (ibid., p.58). The more complex a change in time and space, the more necessary is the enforcement mechanism to realise cooperative mechanisms (ibid., ch.7; North, 1981).

North's institutional theory provides a dynamic view of institutional change over time. According to North, the stability of an institution, which makes complex exchanges possible across both time and space but is not necessarily a sufficient condition for economic efficiency, is accomplished by a complex set of constraints. At the same time, institutional structures also provide an opportunity set in which participants of transactions engage in purposive activities that have implications for potential institutional change. It is argued by North (1990) that the most important sources of change are ever-changing relative prices and tastes. Innovations, newly acquired skills and knowledge and changed preferences all tend to alter the perceived costs of measurement and enforcement in economic transacting, or the so-called 'transaction costs'. These in turn alter the perceived cost-benefit ratio of new contracts (the concepts of 'transaction costs' and 'contracts' are discussed more fully below). Institutional change is, however, incremental, because changes in incentives usually happen at the margin of the existing constraints. In North's view, marginal adjustments that develop on the basis of preceding institutional arrangements differ from one society to another. This is because the bargaining power of interest groups, subjective models of individuals, the norms of behaviour and enforcement mechanisms are different across societies. This explains why a change in relative prices can affect two societies in different ways. In sum, institutional change is path-dependent (Arthur, 1988, 1989; David, 1985; North, 1990). In other words, the consequences of small events and chance circumstances can determine solutions which, once they prevail, lead one to a particular development path (Arthur, 1988).

In addition to North's theory of institutions, two other basic concepts used by various institutional theories, namely 'contracts' and 'transaction costs', are worth mentioning here, in order to have a better understanding of the theories reviewed later in the chapter.

Transaction Costs

The significance of transaction costs in economic analysis was first recognised by Coase, in his seminal article 'The Nature of the Firm' in 1937. In this article, Coase pointed out that 'there is a cost of using the price mechanism' (Coase, 1937). Although he did not use the term 'transaction costs'; later Williamson (1975, 1981, 1985 and 1986) popularised the term and developed it. Basically, transaction costs occur not only in the market but in all kinds of transactions.

There are different categorisations of transaction costs. For example, focusing on contracts as a vehicle of analysis, Cheung (1983) classifies transaction costs into costs associated with negotiating, laying down and enforcing contracts. He also identifies two types of transaction costs, in relation to institutional change, namely the costs incurred in the operation of a set of institutional arrangements and those related to adopting and changing an institution (Cheung, 1986, ch.3). North (1990) groups transaction costs into measurement costs, enforcement costs and monitoring costs. Property rights economists define transaction costs as the costs associated with the transfer, capture and protection of property rights (Barzel, 1989, p.2).

Contracts

The concept of contracts is one of the key-stones of institutional economic theories. As the means of reallocating rights among contracting parties, contracts lie at the heart of the study of property rights (Barzel, 1989) (the theory of property rights is reviewed in the next subsection). Moreover, some economists (for example, Cheung, 1983; Jensen and Meckling, 1976) argue that the firm can be conceived of as a 'nexus of contracts'. That is , organisations are 'the collections of contracts that govern the operations of multiple resource owners' and '[e]ach of the multitude of contracts a firm has with the various parties it deals with constitutes a component in the allocation of the overall variability in income the firm faces' (Barzel, 1989, p.56).

According to Cheung (1974), contracts, which determine the allocation of bundles of rights, should have stipulations that are designed to specify both the distribution of income among contracting participants and the conditions for resource use. With tradable rights, contract terms are consistent with, or determined by, market competition. That is, in an economy with private property rights, contracts are designed to 'maximise the return to all resources subject to the constraints of competition' (Cheung, 1974, p.12). The utility maximisation principle implies that the structure of a contract should be designed to equalise marginal cost and marginal benefit. In comparing costs and benefits, not only conventional production costs but costs associated with measuring, enforcing and monitoring contracts, or transaction costs, should enter into the calculation (Barzel, 1989, ch3).

It has been widely recognised by institutional theorists that in actual transactions enacting and enforcing a complete or perfect contract may be fraught with problems. Because of 'bounded rationality' and 'imperfect information' (Simon, 1951; Williamson, 1975), it may be impossible, or prohibitively costly, to stipulate perfect or complete contracts that can foresee all future contingencies and specify effective measures to handle them. Bounded rationality refers to the limitations on human mental abilities that prevent people from foreseeing all possible contingencies and calculating their optimal behaviour. Imperfect information means a lack of complete information, especially when the actions of one party may not be observable by others. As a result, economies are populated by 'incomplete contracts' and consequently there is always a possibility of 'opportunistic behaviour' (Williamson, 1975) by one contracting party or another. Opportunistic behaviour refers to self-interested conduct resulting from an asymmetric distribution of information between the contracting parties. Williamson (1985, pp.47-8) refers to it as 'self-seeking with guile'. According to Cheung (1974), the contract stipulations or terms are designed to specify the distribution of income among the participants and the conditions of resource use. Under transferable rights, these stipulations are 'determined by transaction costs, natural (economic) risks and legal (political) arrangements' (ibid., p.12).

Having reviewed North's institutional theory and the concepts of 'transaction costs' and 'contracts', all of which are important to an understanding of the basic tenets of 'institutionalism', this section goes on to discuss some specific theories that appear to be relevant or have been widely used to understand socialist economies and enterprises. These theories can be viewed as being nested within institutional economics because they emphasis the role of specific institutions, contracts, information and incentives in economic transacting.

3.3.2 The Theory of Property Rights

Property rights theory has recently been widely used to analyse economic organizations, in both socialist and transition economies. The popularity of this approach among academics, who keep a close eye on the development of post-communist economies and the progress of economic reform in economies such as China, lies in its ability to interconnect ownership rights, incentives and economic behaviour.

The Definition of Property Rights

Property rights can be defined as a 'set of economic and social relations defining the position of each individual with respect to the utilisation of scarce resources' (Furubotn and Pejovich, 1972). Property rights consist of the right to use, appropriate returns from and alienate these assets (Barzel, 1989; Furubotn and Pejovich, 1974). Some economists (for example, Pryoy, 1973; Alchian and Demsetz, 1972) use 'income rights' to refer to the second of the aforementioned rights and the term 'control rights' to the other two.

According to property right theory, the rights people have over assets are not constant and absolute (Barzel, 1989). They are 'a function of their own direct efforts at protection, of other people's capture attempts, and of government protection' (ibid, p.2). This feature of property rights lies in the fact that any asset has multiple attributes that may not be fully known to prospective owners and may not be recognised by the current owner. As a result, there are opportunities for the owners or other people to discover and capture wealth. The difficulty in obtaining information about all the attributes of an asset leads, however, to the costliness of measuring and enforcing property rights.

It is argued that property rights arrangements have a significant impact on the efficiency of an economy. Comprising the limitations, constraints and rules to which people are subject in a society when competing and interacting, the structure of property rights is viewed as a key factor in defining any economic system (Cheung, 1986, ch.3). The assignment of property rights exerts 'system-wide influence on the allocation of resources, the composition of output, the distribution of income, etc' (Furubotn and Pejovich, 1974, p.6). Individuals respond to economic incentives whose pattern is influenced by the prevailing property rights structure (ibid.). Any economic system in pursuit of efficiency should, therefore, be so designed that property rights are well defined and enforced and tradable (Milgrom and Roberts, 1992, ch.9). If no one clearly owns a valuable asset, nobody has adequate incentives to guard, protect and maintain its value. If property rights are not tradable, they will not end up in their most economically efficient use. If ownership rights are not secure, the owners will not invest in assets that they may later lose without compensation. At the same time, however, delineating, policing and transferring property rights incurs transaction costs. If the transaction costs incurred by delineating and enforcing the property rights over assets exceed the benefits of doing so, the assets should be left in the so-called public domain.

Externality and Public Domain

Externalities are costs and benefits that are not incurred by the direct parties to an economic transaction, but by others in the society. The close relationship between property rights and externalities is formally recognised by Demsetz (1967). According to Demsetz, a primary function of property rights is 'that of guiding incentives to achieve a greater internalisation of externalities' (ibid., p.348). An effect, whether harmful or beneficial, becomes an externality not because of some features attached to an asset, but because bringing the effect to bear on the decisions of one or more of the interacting persons is 'too high to make it worthwhile' (ibid., p.348). From the perspective of contracts, the existence of externalities can be attributable to 'either (a) the absence of the right to contract, (b) the presence of contract but with incomplete stipulations, or (c) the presence of stipulations that are somehow inconsistent with some marginal equalities' (Cheung, 1974, p.13).

'Public domain' is a concept closely associated with that of 'externalities'. Given positive transaction costs, attributes of an asset may not be fully measured and/or completely separated between two or more transacting parties. Those attributes that people have not chosen to delineate therefore fall into the public domain, becoming common property (Barzel, 1989, ch.2). Common property results in great externalities (Demsetz, 1967).

Externalities can be internalized, or properties in the public domain can be augmented or diminshed. Whether or not to internalise an externality, or reclaim a common property, is a matter of choice by the people (Barzel, 1989). Property rights arise when those affected by externalities think it economic to internalise the benefits and costs (Demsetz, 1967), or, in other words, when people believe the gains from exercising rights will exceed the costs of doing so (Barzel, 1989).

Property Rights and Agency Problems

Modern production is characterisd by the separation of ownership and control (Chandler, 1962) (a more detailed discussion of the separation of ownership from control is presented in sub-section 3.3.4 below). This feature of modern enterprises generates agency problems. Agency problems arise when decision-making agents are not the major residual claimants and do not bear a major share of the wealth effects of their decisions. Therefore, there need to be effective mechanisms to ensure that agents' decisions and activities are in line with the interests of the residual claimants (the mechanisms to check so-called 'agency problems' are discussed in sub-section 3.3.4 below). Likewise, without a claim on the residual (or surplus) a monitor will also be very likely not to devote himself to optimal monitoring due to the lack of incentives.

Property Rights Theory and Socialist Enterprises

Property rights theory has been widely used to explore problems with socialist economies and state ownership. For instance, considered against the three aspects of property rights, namely the rights to use, appropriate returns from and alienate assets, Kornai (1992, ch.5) argues that the expression of 'property of the whole people' in socialist economies is merely ideology. Firstly, in a socialist economy the rights to residual income are in the hands of neither managers of firms nor the employees. Residual income in the case of state ownership is 'of an economic magnitude set arbitrarily by the bureaucracy' (ibid, p.73). Secondly, state-owned firms do not have rights to dispose of their assets. Finally, control over state firms is exercised by the bureaucracy, which embraces the whole of a socialist society. Although the bureaucracy exercises residual-income rights and control rights on behalf of the 'whole people', there is no incentive for it to act in their interests. On the contrary, there is room for bureaucrats, who are 'agent-owners' of state firms, to serve their own interests without bearing the costs of such behaviour. In sum, according to Kornai, 'whole-people ownership' does not express the real property relations in state-owned firms.

Using the concepts of 'externality' and 'public domain', Jefferson (1998) and Jefferson *et al* (1998) point out that, because no one really owns state-owned firms, assets in the firms therefore become public property. As a result, there are inherent in socialist economies externalities that impair the economic efficiency of the whole economy (ibid.). They continue to argue that, without real owners, state firms suffer severe problems of monitoring. With eroded incentives to monitor the firms, the door is wide open for managers, workers and bureaucrats to behave opportunistically, by extracting value from the firms in excess of what they add (ibid.).

A complementary theory to property rights, which provides important insights into the possible behaviour of bureaucrats in socialist economies is public choice theory, also known as 'the economics of politics' and the 'Virginia School'.

3.3.3 The Theory of Public Choice

The theory of public choice uses economic approaches, especially the institutional economic approach, to study the world of politics. Standing in sharp contrast to conventional political science, in which politicians and bureaucrats are generally regarded as altruistic or as, at least, not entirely selfish, public choice theory treats politicians and state officials as rational individuals trying to maximise their own utilities within a political institution (Downs, 1958; Buchanan, 1968). As viewed by public-choice analysts, a political institution is a system in which 'utility-maximisers' in government choose collectively both for themselves and for the people as voters. The use of collective means to achieve private desires implies only indirect control by individual voters over the resulting outcomes. A politician or a bureaucrat tends to bargain for larger expenditures since he does not have to pay the costs himself (Kau and Rubin, 1982). The 'rent-seeking' behaviour of politicians, however, is said to incur enormous social costs and results in economic inefficiency at the society level (Friedman and Milton, 1979). Politicians and bureaucrats may be influenced by minority interest groups, who gain utility, with the resulting costs imposed on the wider taxpayers or consumers.

Public choice theory emphasises the importance of the political system as a set of institutional arrangements. These arrangements shape the behaviour of politicians and interest groups by providing incentives and constraints (Buchanan and Tullock, 1962). The degree of pervasiveness of 'rent-seeking' behaviour among government officials is determined by the institutions or the constitutional rules. Consequently, public choice theory stresses, not the gains to be expected from changes in bad policy by legislation, but the institutions that produced bad policy in the first place. Public choice analysts believe that simply changing decision-makers will not make significant lasting alterations to government behaviour. Instead, they point to institutional change as the solution. They argue that institutions which produce economically costly outcomes need to be reformed.

As part of the institutional arrangements, corporate governance, or 'enterprise governance', provides incentives and constraints for economic activities. Arguably, governance is an especially important concept in understanding the enforcing of private property rights and for checking agency problems. We therefore now turn to a discussion of corporate governance.

3.3.4 The Theory of Corporate Governance

The importance of corporate governance has been recently recognised by transition economies. Although there are different models of corporate governance, most of the literature in this area is based on the experience of Anglo-American countries.

The theory of corporate governance is particularly complementary to that of property rights (Demsetz, 1967). Indeed, some of the basic concepts used by these two theories are common, such as the concepts of contracts and transaction costs and agency theory. (agency theory is discussed in more detail below). The reason for the re-discussion of agency theory in this sub-section lies in the close relationship between agency problems and the separation of ownership and control in enterprises, from which much of the preoccupation with the corporate governance debate in developed countries stems (Tam, 1999, p.9).

Separation of Ownership and Control

The separation of ownership and control in modern capitalist corporations was first popularised by Berle and Means (1932). Later, after studying production over time, Chandler (1966) concluded that the separation of ownership and control is a central characteristic of modern production. In 1983, Fama and Jensen (1983a) divided the decision process in firms into decision management and decision control and argued that the separation of residual risk bearing from decision management leads to decision systems in corporations that separate decision management from decision control.

Separating ownership from control has many economic benefits. Scale economies in many industries today drive firms to grow larger. Larger firms need capital in an amount that may be greater than the wealth of a few individuals. Meanwhile, risk aversion, inherent in human nature, hinders individuals from investing large amounts in any single enterprise. Scale economies in production and the absence of equivalent economies of scale in the provision of capital, lead to the formation of joint stock companies owned by many owners (Demsetz, 1967). The separation of residual risk bearing from control in such corporations not only enables capital to be raised for large-scale production and risky investments, but uses more efficiently the information relevant to decisions that are diffused among agents at almost all levels of the corporation (Fama and Jensen, 1983a). According to Fama and Jensen, in order to control agency problems incurred by the separation of residual risk bearing from decision control, the decision system of a firm should be designed to separate decision initiation and implementation from the ratification and monitoring of the decision, thereby limiting the power of individual decision agents to expropriate the interests of residual claimants (ibid.).

The separation of ownership from control is not unique to private sector corporations; it is common to other organisations too, such as state-owned enterprises (ibid). In capitalist societies, wherever the separation happens, it is intended to combine the benefits of asymmetrical information and asymmetrical wealth and risk bearing between capital-providers and managers. However, these benefits come with costs which are closely related to agency problems.

Agency Problems and Agency Costs

When ownership is separated from control, an agency relationship exists. Agency costs arise from the divergence in interests between the principal, the nominal owner of the firm, and the agent, the managers (Mirrlees, 1971; Ross, 1973). Because the agent makes decisions in the firm but may have little or no residual claim to the consequences, there are potentially serious incentive problems for managers. There is room for the agent to engage in behaviour like shirking and rent seeking (Alchian and Demsetz, 1972).

Williamson associates agency problems with what he considers are two characteristics of human nature: bounded rationality and opportunism. He argues that agency problems 'would vanish but for the coupling of these two attributes' (Williamson, 1983, p.354). Economising on the transaction costs associated with agency problems, or what are summarized as agency costs, therefore 'reduces to economising on bounded rationality while simultaneously safeguarding the transactions in question against the hazards of opportunism' (Williamson, 1986, pp.110-111).

Some economists study agency problems and costs from the angle of contracts. Agency problems arise because contracts are incomplete: they are not costlessly written and enforced (Fama and Jensen, 1983b; Klein, 1983; also see the discussion of transaction costs above). Fama and Jensen treat all of the contracting participants as agents and define agency costs as 'the costs of structuring, monitoring, and bonding a set of contracts among agents with conflicting interests' (Fama and Jensen, 1983b, p.304). Agency costs also include the residual loss incurred when the cost of full enforcement of contracts exceeds the benefits (Jensen and Mecking, 1976)

Agency problems can exist not only between capital providers and managers of organizations, but within enterprises between different hierarchical levels. Due to the difficulty in surveillance and information handling and filtering, the problem of inducing employees at various hierarchical levels to gear their efforts to a specified common goal, as against pursuing their individual interests, is always present (Alchian, 1969). Given the prevalence of agency problems in the life of enterprises, it is important to have effective mechanisms to check agent's rent-seeking behaviour, in order to enjoy the benefits of specialisation of management and risk bearing without excessive agency costs. These mechanisms or arrangements constitute corporate governance or more broadly enterprise governance.

Governance as an Institutional Arrangement

Even with the institution of private property, modern capitalist economies still need an additional set of institutional arrangements – effective corporate governance - to ensure that managers (agents) act in the interests of the owners (principals) and that firms properly respond to profit incentives in the market (Steinfeld, 1998, ch.3). There are many definitions of corporate governance, which are not completely in line with each other. Some (for example, Tricker, 1993; Qin and Li, 1995) put more focus on the structure of the relation between managers, the board of directors and the shareholders. With the separation of ownership and control, it is argued by Fama and Jensen (1983a) that, by concentrating the rights of decision control into the hands of the board, while delegating those of decision management to appointed executives, the power of individual decision agents to expropriate the interests of residual claimants is limited. Thereby, corporations can effectively control agency problems. The composition of the board of directors may have a substantial impact on the effectiveness of the board as a governance structure. Apart from internal directors, who are usually executives of the firm, it has been argued that there should be a considerable number of outside (or non-executive) directors. Outside directors act as ' arbiters in disagreements among internal managers and carry out tasks that involve serious agency problems between internal managers and residual claimants' (ibid, p.315), e.g. setting and monitoring executive remuneration. Effective separation between decision management and decision control calls for incentives for outside directors to carry out their tasks properly and not collude with managers to harm the interests of the residual claimants. In a mature market economy, such incentives are thought to lie in the desire of outside directors to develop reputation as experts in decision control (Herman, 1981). It is argued that, although the value of the outsider directors' human capital depends primarily on their performance as internal decision mangers in other organisations, they use their directorships to signal to internal and external markets that they are decision experts (Fama and Jensen, 1983a). However and more importantly, if internal decision control breaks down and an outside takeover is activated, the outside directors' human capital will be devalued substantially.

Other definitions of corporate governance are concerned not only with the structure of the boards, but more broadly with a whole set of institutional arrangements that determine what corporations can do, who controls them, how that control is exercised, and how the risks and returns from activities they undertake are allocated (Blair, 1996, p.3). For example, Cadbury's (1993) definition that 'corporate governance is the system or process by which companies are directed and controlled'; Gilson and Roe's (1993) definition that 'corporate governance institutions operate not only to harmonize relations among the corporation and its shareholders, executives and employees, but also to directly facilitate production efficiency'; and Williamson's (1986) that governance structure refers to 'the institutional framework within which the integrity of a transaction is decided', all fall into the latter group. This group of definitions is preferred in this thesis. This is because the problem of corporate governance not only exists in joint-stock companies but is relevant to almost all forms of enterprise. It is in this sense that 'corporate governance' can be extended to the concept of 'enterprise governance'. The latter is a broader concept and encompasses governance arrangements not only for corporations but also for firms of other legal forms.

According to the theories that are concerned with the 'broader' governance structures, governance mechanisms include a wide range of institutional arrangements, such as a set of strict accounting standards and financial disclosure requirements, highly developed capital markets and specialised financial institutions, a significant corpus of law and regulations, and well-functioning manager labour markets, etc (Rask *et al.* 1998; Steinfeld, 1998). In addition to these arrangements, there are more powerful governance mechanisms, such as hostile takeover bids (Manne, 1965; Jensen, 1988; Sheifer and Summers, 1988; Varian, 1988) and outright bankruptcy proceedings (Aghion, and Bolton, 1988). An effective debt market and well-enforced bankruptcy procedures serve as powerful governance mechanisms to keep in check equity holders' inclination to take a high risk with borrowed capital (Milgrom and Roberts, 1992, ch.14 and 15). Likewise, potential hostile takeovers may serve as a device to check managerial discretion in order to protect the interests of equity holders (Manne, 1965; Jensen, 1984, 1986, 1988).

Steinfeld (1998, ch.3) distinguishes two aspects of enterprise governance in an economy, namely the 'incentive' role and the 'selection' role. In order to provide incentives for managers to maximise returns on investment, there must be governance arrangements that give accurate and adequate data to capital providers to monitor managerial performance effectively. Under such institutional arrangements, managerial behaviour that increases the managers' own utility at the expense of the owners' will be apparent to the owners and prevented or penalised. If this behaviour still happens, the value of the managers' human capital will be depreciated and their career prospects be jeopardized because their reputation as effective managers is reduced. In other words, the threat of devaluation of a manager's human capital in the managerial market provides further incentives for the manager to behave in the interests of the owners in market economies. Meanwhile, effective enterprise governance has a selection role and should function in such a way that inefficiently managed firms are distinguished from the ones that are run efficiently. The successful enterprise will then be rewarded with more investment and inefficient ones will be punished by a withdrawal of capital. The selection and incentive aspects of enterprise governance 'go hand in hand' (ibid, p.63). For example, the threats of takeovers and bankruptcy serve both as checks on managerial opportunistic behaviour and as penalties for bad firm performance (Milgrom and Roberts, 1992, ch.15). In order for governance arrangements to play effective incentive and selection roles, it has been argued that the information used to assess the performance of enterprises must be nothing but business-related and these data must 'actually mean something, mean something consistently from firm to firm' (Steinfeld, 1998, p.64).

Enterprise Governance in Some Transition economies

The importance of corporate governance seems to have been recognised by post-communist countries and transition economies relatively later than the general importance of property rights. Employing a 'big-bang' approach towards economic reform, former socialist countries in Central and Eastern Europe undertook large-scale privatization, but often in the absence of the reform of infrastructures that would allow a market economy to function efficiently. These infrastructures include commercial law and contract law and effective protection of private property rights. Perhaps unsurprisingly, given the above discussion, many studies of economic transactions in Central and Eastern European post-communist countries have pointed to the unsatisfactory results of economic reform. For instance, on the basis of experiences in Russia and Poland respectively, Earle, *et al.* (1995) and Sachs (1993) found that privatised firms still seem to behave like their state-owned predecessors because the economic and legal environment in which the newly 'freed' enterprises operate remains in large part unchanged. Based on a study of 14 Hungarian enterprises, Whitley, *et al.* (1997) argue that a change in ownership is just one factor in achieving efficiency improvement. They maintain that a competitive environment, incentive structures and the broader institutional environment are especially crucial for the success of economic reform. In short, all of these studies call for the establishment of effective governance arrangements to ensure potential economic efficiency promoted by private property rights.

3.4 Formulating the Theoretical Framework

From the above review of some major critiques of socialist economies and especially institutional theories relevant to understanding the problems of state ownership in socialist societies, it is clear that the institutional perspective is a very powerful tool for studying socialist enterprises. It links enterprise behaviour with the institutional arrangements which the firms face. In other words, this approach can be used to explore how enterprises behave in response to incentives and constraints present in the institutional environment of a reforming socialist economy.

China has adopted a gradual approach towards economic reform. It has been argued, however, that the market competition introduced in the reform process has been applied mainly to non-state firms (Nee, 1992; Li, 1996). Reform measures introduced in the 1980s and the early 1990s for the Chinese state sector, namely the delegation of management autonomy through the Contract Management Responsibility System (CMRS), appear to have failed to achieve the goal of revitalising the state-owned firms (Jakson, 1992; Hassard and Sheehan, 1997; and Chapter 2 of the thesis). In the face of the general failure of the CMRS, in the mid and late 1990s, enterprise reform in China shifted its focus to corporatising state enterprises, or the so-called Modern Enterprise System (MES). Some existing studies, based on the early experience of corporatisation of Chinese state firms, suggest that the effects of this reform measure are still unclear (The Research Group of Chinese Enterprise Associate, 1999; Zhou and Zhang, 1999).

A number of researchers (for example, Granick, 1990; Pan, 1997; Wu, 1994) have already used property rights theory to study Chinese state-owned firms, arguing that ill-defined property rights over state assets are the source of the problems faced by them. They imply that this theory is particularly relevant to understanding the problems of endless state intervention in China, a lack of responsibility for failure among managers of state firms and a lack of proper motivation for management to pursue efficiency gains. As discussed above, the structure of property rights exerts system-wide influence on individual economic activities, by shaping the incentives and constraints to which individuals or individual organizations are subject when competing and interacting. Therefore, property rights theory is used in this thesis as one of the keys to defining the institutional environment of Chinese firms in the 1990s. However, this theory just forms part of the approach to the questions that lie at the heart of the discussion in this thesis. To address the central research question - whether the economic reforms after 1993, especially the measure of MES, have changed state firms into commercial entities operating according to market signals, as intended - the study looks at changes in the institutional environment of state firms and how the behaviour of firms has adapted to the institutional changes. As agreed by institutional theorists, the economic activities of individuals and organisations are conducted within the framework of an institutional environment. Without doubt, the structure of property rights shapes some important features of the institutional environment, as explained above; but institutional arrangements are arguably broader than this. Corporate governance, or broadly 'enterprise governance', is also important in defining the rules for economic interaction between individuals or individual organisations.

As suggested by the studies of transition economies in post-communist countries, mentioned in the last section, it seems unlikely that the measure of privatisation alone will improve a firm's economic performance. The establishment of effective corporate governance or enterprise governance also seems important in directing individuals' decisions and enterprise behaviour towards pursuing economic efficiency. Many recent empirical studies (for example, Simon, 1996; Steinfeld, 1998; Tam, 1999) of firms in China have also shown that the problems of official interference and managerial abuses have more to do with *enforcing* than with *defining* property rights. Therefore, enterprise governance, together with the structure of property rights, is the central institutional arrangement which forms the analytical framework used in this thesis.

Where the relations between enterprises and the incentives and constraints present in the institutional environment are concerned, some aspects of Kornai's theory of socialist economies are compatible with the institutional approach adopted in this thesis. In particular, the degree of the softness of budget constraints and which coordination mechanism is dominantly used to organise economic activities can be seen as predominant features of the institutional arrangements presented by the structure of property rights and enterprise governance. In addition, as Kornai (1992, ch.6) argues, coordination mechanisms not only define the relations a firm has with its external institutional environment, but shape the mode by which the firm is managed and organised. For example, state firms in a socialist economy, whose external relations are coordinated bureaucratically, tend to employ the same mechanisms to direct interactions within state enterprises (ibid.). The analysis of the coordination mechanism can, therefore, be used to examine management and organisational issues within Chinese firms, the subject that is addressed next.

The elements of the theoretical framework discussed so far deal mainly with a firm's external relations; and the firm itself remains, to a large extent, a 'black box'. This raises the question: if changes in the external institutional environment do provide increased incentives for the management to operate efficiently, as the property rights literature and the theory of corporate governance above suggest, how does they translate in terms of managerial decision making and business organisation within the 'black box' of the firm?

Institutionalist economic theories suggest that the move from state to private ownership and an increase in the effectiveness of corporate governance will produce improved performance. However, little has been written on precisely how these changes are likely to affect performance, except that the external changes are believed to create incentives for management to search out internal cost savings. In other words, if clarified property rights and improved corporate governance are to lead to improved performance, This implies substantial restructuring within firms; changes must occur to complement those happening in the external environment (Woodward, 1988, 1990; Bishop and Thompson, 1994). The question then is which internal issues should be studied so as to examine the effects of economic reform in the 1990s on the behaviour of Chinese state enterprises.

Based on a review of the management literature and empirical studies of British privatised companies, Parker (1993, 1995a, 1995b) identifies six aspects of management and organisation where changes are likely to be crucial if significant performance improvements are to occur when a firm is privatised. The six areas are: goals, management, labour, communications and reporting systems, organisational structure, and the nature and location of the business. This framework is adopted in this thesis, in a modified form, to study the internal changes in Chinese enterprises.

The six areas, where changes may happen when the institutional environment of firms changes, are re-organised in this thesis under the headings detailed below. Although they do not appear as a separate heading, internal control and incentive mechanisms used by firms are an important issue examined by the research, but within the context of goals, management and organisational structure. As Alchian (1969) argues, agency problems exist not only between top executives and the owners, but between various hierarchical levels within the firm. It is, therefore, important for a firm to establish internal control and incentive mechanisms to tackle effectively this kind of agency problem. In the empirical work reported in this thesis, especially the case studies (Chapters 6 to 9), whether and how internal control and incentive measures in Chinese firms changed with changes in the external institutional arrangements, are studied mainly by examining firms' practices in terms of setting management remuneration and the performance evaluation of managers and other employees. It should be pointed out that the subject of 'the nature and location of the business', identified by Parker as one of his six aspects of management and organisation, is not explicitly addressed in the thesis under a separate heading; although it is touched upon when examining firms' external relations.

The management and organisational issues in firms in the Chinese electronics industry (CEI), which are examined by the thesis, are summarised under the following headings:

(1) Goals;
(2) Organisational structure;
(3) Management: top management and middle management;
(4) Labour;
(5) Capital and investment.

(1) Goals

This is probably the most obvious area in which change can be expected to happen when there is change in the structure of property rights and other institutional arrangements. With economic reform deepening and more market elements introduced, it is to be expected that a firm's goals will become more commercially oriented or profit oriented. This should also be associated with less need for administrative intervention in setting firms' objectives.

(2) Organisational structure

With the re-orientation of management goals, it is expected that there will be a restructuring of functional departments or sections. Non-business related units, such as political education services, may be shut. At the same time, since a firm's survival and development is supposed now to be more dependent on the market, the management can be expected to place more attention on product development to gain competitive advantage. This suggests the establishment of, or more investment in, the R&D and marketing functions.

When firms become more commercially oriented, the internal balance of power between management and Party organs can be expected to change. Managers should have a more decisive say on business issues and Party cadres should focus more on their own internal affairs and wider political issues. Meanwhile, the structure of Party organisations within firms may shrink and the number of full-time Party cadres may be reduced.

Another dimension of organisational structure where change may happen is in terms of internal communications. Not only may the channels used for information exchange be different, but the content of information can also be expected to change. When a firm becomes a commercial entity, priority should be put on accumulating and disseminating business-related information rather than the political and social oriented information, as previously circulated.

(3) Management

Change in management, especially in top management, is often crucial for a new strategic direction to be built and for a new culture to be introduced into an organization (Argyris, and Schon, 1978). What is sometimes called 'double-loop learning' (ibid; Bulter, 1991; Parker and Stacey, 1994) has to be adopted in order for practices shaped by the older culture and traditions of the state sector to be shaken off and for new ways of managing to be adopted. To serve this purpose, the most important step may be to establish new management that does not carry the baggage of the past (Kotter and Hesketh, 1992). Bringing new blood in at the managerial level is one of the common practices in changing management, but 'new management' need not always mean the replacement of old people with new ones. Training can sometimes do the same task by altering the mental framework or 'mental map' adopted by existing management.

Arguably the importance of top management, especially the CEO or the equivalent, lies in their influence over the strategic direction of the firm (Finkelstein and Hambrick, 1996). Some researchers (for example, March and March, 1977; Lieberson and O'Connor, 1972; Salancik and Pfeffer, 1977) argue that managers account for little variation in organisational outcomes; while some other studies (for example, Smith, *et al.*, 1984; Virany and Tushman, 1986; Gupta and Govindarajan, 1984) find that top executives can substantially alter the success of organisations. To bridge these two opposing views of the effectiveness of executives, Hambrick and Finkelstein (1987) point to a contingency theory. They argue that the effectiveness of an executive is closely associated with the discretion available to him or her, provided that there are effective mechanisms to check agency problems. One of the determinants of managerial discretion is the firm's operating environment. This suggests that, when state firms become more immune from government intervention, as should have happened as economic reform deepened in China in the 1990s, senior executives should have become more critical to the firms' business success.

In addition, when state firms become more independent of government agencies, it can be expected that the mode of appointing managers, at both the top and the middle levels, will change. Where market reforms become entrenched, administrative interference from government agencies should be reduced when making staff appointments. Meanwhile business related skills and abilities, rather than political and ideological qualities, should become the main consideration when choosing managers. Changes are also to be expected in the remuneration of managers and in the evaluation of their performance. These are two areas closely related to the control and incentive mechanisms used within firms. Connecting managerial compensation with individual performance provides managers with stronger efficiency incentives. For example, there is evidence in market economies that using performance-based pay schemes for managers has positive effects on the performance of firms (Abowd, 1990; Lawrence and Sherer, 1990). Therefore, as part of the change process, the expectation is that the performance of managers in Chinese state firms will now be evaluated more in accordance with agreed business goals, and managers will be remunerated more according to the results of such evaluation, than previously. Such practices are expected to replace politically determined remuneration and promotion.

(4) Labour

Labour policy in the state sector before and in the early stages of economic reform was based on a life-time employment, or the so-called 'iron rice bowl'. Firms served not only as production units but as communities, providing workers and their families with a variety of social welfare services. Wage rates were set according to a nationwide salary system under which salaries were graded according to the seniority of the post and the age of the employee (Child, 1996, ch.9). When the reforms deepened in China, the system of permanent employment was abandoned and contractual employment began to prevail (see Chapter 2). Meanwhile, pecuniary means were introduced to motivate employees. In such circumstances, it is to be expected that, with the reform of state enterprises, pay will have become more closely linked to individual performance. Changes in employment policies and the organisational structure within firms may also mean that large-scale labour lay-offs occur in state firms, in order to lessen the overstaffing long suffered by many state firms in China.

(6) Capital and investment

Investment projects in Chinese state firms used to be funded by government subsidies and soft bank loans (Steinfeld, 1998). Bad returns on previous investments did not stop new funds being pumped into state firms. Banks served as cashiers of the government and cared little about a state firm's ability to repay loans (Wang, 1998). With the new reform measures introduced in the 1990s, especially those in the financial market, it is to be expected that firms will have moved towards using multiple sources to fund their investment projects. For corporatised SOEs, for example, it is to be expected that issuing shares will have began to play a more important role in raising capital. When banks begin to be asked to take care of their own balance sheets, it is to be expected that firms with bad performance will find it more difficult to get new bank credits.

3.5 Conclusions

The purpose of this chapter has been to review literature that is relevant to the subject of this thesis and to providing a theoretical framework for the remainder of the thesis and especially the empirical work. The analytical framework needed to be able to explain the difference in behaviour patterns between state-owned firms and firms under other ownership forms. It also needed to be able to address the causes of different levels of economic efficiency within each ownership category.

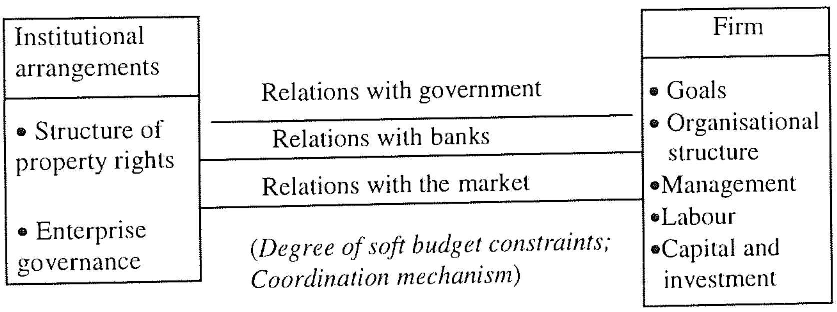
The literature review in this chapter began with some theories critiquing socialist economies. Hayek's and other economists' studies, which criticise the basis of socialist central planning calculation, were reviewed. Another classic critique of the socialist system, reviewed in this chapter, was Kornai's political economics of socialism. These critiques helped provide a general understanding of the nature of and major problems embedded in socialist economies and state ownership. Following this discussion, the chapter moved on to review some institutional theories that could be relevant to understanding socialist economies. North's theory of institutions and the concepts of 'contracts' and 'transaction costs' were discussed, in order to provide some basic ideas about the role of institutions in economic transacting and thereby facilitate a better understanding of the theories reviewed later. The theories discussed later and in detail were property rights theory, public choice theory and the theory of corporate governance.

Based on this literature review, it was argued that the institutional perspective, in particular property rights relations and enterprise governance, could be usefully used in this thesis when assessing the effects of economic reform in China on the behaviour of state enterprises. As property rights theory suggests, the structure of property rights has a strong influence on the performance and structure of an enterprise. It seems relevant to an understanding of some of the major problems of Chinese state firms, such as endless administrative intervention and the lack of responsibility for economic failure among managers. However, it has been argued in this chapter that property rights theory should form only part of the analytical framework. Corporate governance, or more broadly 'enterprise governance', is also part of the institutional arrangements that shape the incentives and constraints that managers in enterprises face. Therefore, this theory should also included. The rationale for this lies in the close relationship between private property rights and effective corporate governance. Corporate governance, or enterprise governance, can be interpreted as the enforcement of property rights through 'selection' and 'incentive' roles. Such enforcement seems especially important in a transitional economy, like China, where property rights over assets in state firms need to be created and protected (Steinfeld, 1998). There is evidence from China and Central and Eastern Europe that the problems faced by state firms have more to do with the *enforcement* of property rights than with the *definition* of the rights.

After the institutional environment was explored in the analytical framework, attention shifted to management issues within enterprises. Six aspects of management and organisation that can be expected to change when the institutional environment changes, as identified by Parker (1995), provided guidance to where changes might happen after the ownership status of Chinese firms and related institutional arrangements in China altered. Re-organising the six areas under somewhat different headings, so as to better serve the needs of research into Chinese enterprises, it was decided that this thesis would examine in its empirical section firms' goals, organisational structure, management, labour, and capital and investment.

In summary, the theoretical framework used in this thesis is illustrated in Figure 3.1. The central research question is whether the economic reforms after 1993, especially the Modern Enterprise System (MES), have changed state firms into commercial entities operating according to market signals, as intended. In order to address this question, property rights theory and the theory of corporate governance are used as tools to explore the effects of changes in the firms' institutional environment as a result of the MES and other reform measures in the 1990s. The left side of Figure 3.1 contains the institutional arrangements presented by the structure of property rights and enterprise governance. The main features present in the institutional arrangement and its systematic influence on firms are examined mainly by studying firms' external relations, namely relations with government agencies, banks and the market. The concepts of coordination mechanism and soft budget constraints are used to explore the main characteristics of these external relations. The term 'coordination mechanism' refers to the means by which resources are primarily allocated. As mentioned earlier, Kornai (1992) distinguished two types of coordination mechanisms, namely the market mechanism and bureaucratic mechanism. The firms, which are represented on the right side of the figure, organise their economic activities in response to incentives and constraints present in the institutional environment. Within firms, five management and organisational areas, developed from Parker's studies, are examined in subsequent chapters to see whether changes in the external environment, brought about by the new round of economic reform, have led firms to establish management practices consistent with operating according to market signals.

Figure 3.1 The Analytical Framework



Based on the theoretical framework, the remaining text of the thesis, especially Chapters 5 to 9, reports the results of the analysis of the data collected during my doctoral studies and especially the fieldwork in China in early 2000. On the basis of the empirical section of the thesis, the central research question and the three sub-questions, namely (a) have there been fundamental changes in the institutional environment of state firms? (b) what kind of co-ordination mechanism is used by the firms after more market elements have been introduced into the Chinese economy? and (c) have changes in the external environment led the firms to adopt management practices well tailored to their business needs? are addressed.

4. The Comparative Performance of State-Owned Firms in the Chinese Electronics Industry

Chinese economic reform was initiated in 1978, as an attempt to rebuild the economy after the Great Cultural Revolution (GCR), and as the Communist leadership's response to the failure of the bureaucratic coordination mechanism (Boisot and Child, 1988; also see Chapter 2). The primary objective of the reforms was to improve the efficiency of the whole economy in general, and that of state-owned firms in particular. Under the reform measures, the central planning system, which was the predominant coordination mechanism of China's economy before 1979, was gradually replaced by a market mechanism. The dismantling of the central planning has greatly increased economic productivity, and China has been experiencing unprecedented GDP growth (the GDP grew at an average rate of 10.4% annually between 1980 and 1999) (China Online, 2001). However, the relative performance of the state sector seems to have deteriorated, in spite of various reform measures (see Chapter 2). In sharp contrast, non-state firms appear to thrive in the increasingly fierce market competition (Li, 1996).

Since this research examines the impact of the economic reforms in China in the 1990s by using evidence from the Chinese Electronics Industry (CEI), this chapter turns attention to economic performance of the targeted industry. As part of the Chinese industrial economy, the CEI seems to have experienced similar rapid growth to the rest of the economy as well as similar economic problems (Xie, *et al*, 1999). It might be expected that the CEI would display a general development trend in line with that of China's economy as a whole. However, the nature of the CEI may make it distinguishable from other Chinese industries. The CEI is composed of a wide range of firms in terms of products, the sophistication of the technology employed and the intensity of market competition faced. The products range from those with low technology such as bulbs, through to those of medium technology such as TV sets, to those involving high technologies such as computers and aerospace products (*The Yearbook of the Chinese Electronics Industry*, 1993). In the CEI there are such sub-sectors as consumer electronics, that now rely mainly on the market for their inputs and outputs, and sub-sectors, such as radar-related products, which receive favourite treatments from government and operate, to a large extent, as monopolies in the domestic market (Xie, *et al*, 1999). Since the CEI includes such a variety of sub-sectors, its growth trend may, in general, be in line with that of the whole economy, but at the same time it may reflect some peculiarities.

Starting with a brief review of the history of the CEI during the reform era, this chapter will go on to make a comparison of performance in the industry across ownership types. Using data on the CEI from Chinese official sources, the analysis begins with descriptive statistics; later, comparisons of labour productivity and total factor productivity (TFP) are provided. Because the official data did not distinguish corporations in the CEI according to their origins, the category of limited liability companies used in this chapter includes not only those transformed from state firms but those with other backgrounds. The main purpose of the statistical comparison of productivity is to reveal differences in the broad performance results across ownership types within the CEI. These results provide an initial approach to assessing the central research question in this thesis, namely whether the economic reforms after 1993, especially the MES, have changed state firms into economic entities operating according to market signals, as intended, before turning to the questionnaire and case study results.

4.1 The development of the CEI During the Period of Reform

Before the economic reforms, there were in China fewer firms manufacturing electronic products. Most of them produced specific equipment and instruments for state-owned broadcasting stations, telecommunication organisations and other enterprises. The products for the citizens to consume were limited to simple products like bulbs and radios. The quality of the products was poor and the quantity was small (*The Yearbook of the Chinese Electronics Industry*, 1985, p.I-12). What made things worse was the isolation of the Chinese economy, which widened the gap between the level of advanced technology at the international level and that of the CEI (*The Yearbook of the Chinese*

Electronics Industry, 1986, p.I-27; Simon, 1992). Most of the firms were state owned, with the exception of a relatively smaller number of collectives. The situation, however, changed with the implementation of the economic reforms and the open-door policy in the late 1970s.

The development of the CEI from 1979 onwards is closely associated with the process of Chinese economic reforms. Reform measures, together with the open-door policy, have brought about a rapid development of the industry, as well as a boom in the non-state economy in the CEI (Luo and Tan, 1998; Simon, 1992). For the sake of clearness and convenience, the development process of the CEI since the reforms began in 1979 is divided here into three stages, with criterion in line with the general process of Chinese economic reforms. The first stage is from 1979 to 1984, the second from 1984 to 1993 and the third from1993 onwards.

4.1.1 The First Stage: 1979—1984

Economic reform in China during this period was carried out on an experimental basis. The industrial economy as a whole was still under the central planning system. The CEI at large remained as it was before reform (*The Yearbook of the Chinese Electronics Industry*, 1985, p.I-9). On a small scale, however, there were some changes. The open door policy brought into China imported consumer electronic products, such as colour TVs and cassette recorders. Chinese people was so fascinated by these imported products that the demand for such consumer electronic products leaped. In order to meet the rapidly increasing demand for electronic products, especially consumer ones, a large-scale introduction of Western and Japanese production equipment was undertaken by Chinese firms, most of whom were SOEs, financed mainly by government subsidies (Xie, *et al.*, 1999). During 1979 to 1983, 126 production lines were introduced, more than half of them for consumer electronic products (*The Yearbook of the Chinese Electronics Industry*, 1986, p.II-69). In addition, the open-door policy bought into China foreign capital. In 1981 the first joint venture in the CEI, the Furi TV Set Ltd., was set up in the province of Fujian, with the Japanese company Hitachi as the foreign partner.

4.1.2 The Second Stage: 1984—1993

After 1984, industrial reform spread nationwide in China. Two of the major reform measures during this period of time were the dual price system and the Contract Management Responsibility System (CMRS) (see Chapter 2 for a discussion). In SOEs production was divided into two parts: one was the production within the mandatory plans, sold at the regulated prices; and the other was production outside the plans, which could be sold at market prices. Under the CMRS, managers of state firms (and some collectives) signed contracts with supervisory government agencies and were granted some nominal autonomy over the affairs of production, product mixture and personnel. Under these reform measures, the proportion of production under state plans declined and market mechanisms began to play a greater role in transactions between enterprises.

Many significant changes took place in the CEI during this period of time. In the 1980s in China, a great discrepancy between the demand for and the supply of consumer electronic products, especially colour TV sets and cassette recorders, created a sellers' market. This situation led to what some see as a crazy level of entry of firms into this sub-industry (Simon, 1992; Xie, *et al*, 1999). Approved and sponsored by central and local governments, projects for introducing foreign technology rocketed, most of which were carried out in the form of the import of complete-knock-down production sets (Shi, 1998). In the single year of 1985, for example, there were 113 technology introduction projects for TV sets in the CEI (*The Yearbook of the Chinese Electronics Industry*, 1986, p.II-71). In addition, many non-state consumer electronics producers, most of them collectives and joint ventures, and some state firms that used to manufacture military electronics products, entered consumer electronics production. As a result, the output of these products increased dramatically. Taking colour TV sets as an example, the output in 1993 was three times that in 1985 and over sixty-fold compared with 1982 (see Figure 4.1). In the 1980s and the early 1990s the consumer electronics sub-sector, especially the manufacturing of colour TV sets, was the main contributor to the output of the CEI (*The Yearbook of the Chinese Electronics Industry*, various years).

Figure 4.1 The Output of Colour TV Sets from 1980 to 1999

Aston University

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1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994

time

Source: *The Yearbook of the Chinese Electronics Industry*, various years.

Economic reform also gave more space for the development of firms under non-public ownership. According to the statistical data from the Chinese electronics industry ministry, the number of enterprises with FDI (joint ventures and wholly foreign owned firms) was 23 in 1985 and had increased to 154 in 1990. In addition, private-owned firms appeared in the CEI. The rapid growth of the non-state sector in the CEI during this period of time is evident in the performance indicators shown in Table 4.1. The figures reveal that, generally speaking, the non-state sector had a faster growth rate of gross value of industrial output (GVIO) than state firms after 1988 and its share in the GVIO of the CEI increased from over 30% in 1988 to about 45% in 1992.

Table 4.1 GVIO by Ownership

	SOEs			Collectives			Joint ventures*			Others		
	GVIO (100 million Y)	Index (%)	Share in GVIO (%)	GVIO (100 million Y)	Index (%)	Share in GVIO (%)	GVIO (100 million Y)	Index (%)	Share in GVIO (%)	GVIO (100 million Y)	Index (%)	Share in GVIO (%)
1988	427.78	100.00	68.79	100.36	100.00	16.14	38.71	100.00	6.22	55.00	100.00	8.85
1989	456.63	106.74	69.38	102.64	102.28	15.59	45.25	116.89	6.87	53.65	97.55	8.15
1990	469.50	109.75	67.25	97.50	97.15	13.97	67.90	175.41	9.73	63.20	114.90	9.05
1991	561.70	131.31	63.38	128.20	127.75	14.46	113.60	293.46	12.82	82.80	150.54	9.34
1992	602.40	140.82	55.43	152.70	152.16	14.05	168.90	436.32	15.54	162.80	295.98	14.98

*The categories of joint venture and wholly foreign owned firms are combined into one group labelled 'joint ventures'.
Source: calculated based on data from *The Yearbook of the Chinese Electronics Industry*, various years.

4.1.3 The Third Stage: 1993 onwards

Since 1993 economic reform has deepened in China (see chapter 2). In the new reform era, the CEI has faced opportunities as well as challenges. More and more intensive use of information technology by all the sectors in the Chinese economy, the requirement of further economic development for the modernisation of infrastructure, and the automation of office systems have provided the CEI with great development potential, especially for sub-sectors involving high technology, in particular the computer and telecommunication industries (Hu, 1993). With these favourable conditions, these sub-industries grew rapidly in the second half of the 1990s. The share of the computer sub-sector in the CEI's GVIO, for example, rose from 8.75% in 1992 to more than 18% in 1999 (*The Yearbook of the Chinese Electronics Industry*, 1993, 2000).

By contrast, the consumer electronics sub-sector has grown much more slowly during this period of time. Its share in the GVIO of the CEI declined from 49.2% in 1991 to less than 35% in 1999 (ibid.). The large production capacity accumulated during the 1980s led to an excessive supply of goods and therefore a saturated market. In the mid and late 1990s the competition in the domestic market for consumer electronic products was so fierce that most domestic producers were involved in continuous price wars. This resulted in a decline in the profitability of domestic enterprises as a whole (Xie, et al., 1999). In response, central government placed a restriction on the establishment of new TV set factories. Meanwhile, mergers, usually arranged by the government, took place among firms producing consumer electronics. This led to a great decrease in the number of consumer electronics producers. About one-third of domestic TV manufacturers, for example, were acquired by other firms during the period from 1994 to 1999 (ibid). Even so, in 1999 about a half of the remaining domestic manufacturers of consumer electronics recorded losses (*The Yearbook of the Chinese Electronics Industry*, 2000, p.64).

In addition to the market opportunities and challenges faced by the CEI, the reform measures implemented in China in the 1990s brought about changes in the industry. Under the Modern Enterprise System (MES), the number of limited liability companies increased from 42 in 1993 to 311 in 1999. At the same time, fierce competition in the marketplace led some firms to bankruptcy, most of them collectives (Xie, *et al.*, 1999). As a result of bankruptcy and mergers among SOEs and collectives, the number of firms in the CEI, especially that of SOEs and collectives, decreased in the second half of the 1990s. Furthermore, within enterprises the workforce was streamlined. Table 4.2 shows the changes in the number of enterprises and the number of the employees in the CEI since 1992. The figures reveal that there was a small increase in the number of firms before 1995, but afterwards the number declined. Although the number of firms increased during the period from 1992 to 1995, there was a continuous decrease in the number of employees, as a result of labour streamlining. The declining trend became more apparent after 1995, when there was also a decrease in the absolute number of firms.

Table 4.2 The Number of Enterprises and of Employees in the CEI from 1992 to 1999

Source: *The Yearbook of the Chinese Electronics Industry*, various years

Note: employment is the average for each year.

Joint ventures and wholly foreign owned firms developed rapidly during this period of time. There are many reasons for this growth and only a handful will be mentioned here. Firstly, the opportunities in the CEI mentioned above had given priority to the development of high technology sub-industries. However, the priority given to these sectors by the central government could not be satisfied by the capability of most domestic firms to innovate technological advances; therefore investment opportunities for foreign firms were provided (Simon, 1992). The technology that the Chinese government wanted from abroad was so sophisticated that foreign businesses preferred direct involvement in the production in order to have tighter control over the technology (this applied except to some strategically important sub-industries, where the direct involvement of foreign investment remained highly restricted) (ibid). Secondly, high tariffs made it more attractive to set up production bases in China than to import goods (Shaw and Meier, 1994). As a result, there has been a great increase in the number of firms with foreign direct investment, especially wholly foreign owned companies (see Table 4.3). Alongside the increase in the number of firms, the share of joint ventures and wholly foreign owned firms in the output of the CEI has increased steadily. In 1999 it rose to 44.57%, while that of SOEs fell to 27.76%.

4.1.4 The Current Composition of the CEI

There are nine sub-industries in the CEI according to the categorisation used in *the Yearbook of the Chinese Electronics Industry* (these sub-industries are listed in Appendix 4.1). By the end of 1999, the total number of firms in the industry was 2839, with a total of 1,592,975 employees. Of the 2839 firms, 1001 were SOEs, 618 collectives, 46 private enterprises, 311 limited liability companies and 738 firms with FDI. In terms of size, 384 were large enterprises, 538 middle ones and 1917 small ones, based on the Chinese official criteria (the boundary between large-sized and middle-sized firms is 500 million Yuan in terms of both capital and sales revenue; the boundary between middle and small firms is 50 million Yuan). Relatively speaking, collectives had the smallest average size; joint ventures and wholly foreign owned firms the largest; and SOEs and limited liability companies fell in between. Treated separately from other limited liability companies, joint stock companies were much larger in size than the firms under other ownership forms. When the profitability of firms is considered, there were 1159 enterprises making losses in 1999, 500 of them SOEs, accounting for about a half of the SOEs in the industry. The proportion of collectives recording losses was 45% and that of joint ventures and wholly foreign owned firms was 35%. It seems that limited liability companies as a whole registered the least business losses: only 76 out of 311 firms were in the red in 1999. Among the limited liability companies, about a half of the corporations exclusively owned by the state were making losses; while one fifth of joint stock companies, some of which were transformed from SOEs, reported deficits (*The Yearbook of the Chinese Electronics Industry*, 2000, p.60). However, the better performance of joint stock companies has to be treated with caution because, according to a report in *The Economist* (7^{th} –13^{th} April 2001, pp.9-13), more than two-thirds of the largest SOEs and corporations with the state as the only or the majority shareholder 'cooked their books'.

From the above description, it appears that in the CEI SOEs were losing their dominant position and had been outperformed by non-state enterprises in the 1990s. The following section examines in more detail to what extent this is true, through a statistical analysis of performance across ownership types.

4.2 Comparison of Performance across Ownership Types

A number of studies have evaluated the effects of economic reform on the performance of China's SOEs, some of which have made a comparison with other ownership forms. The conclusions of these studies are not always in line with each other. Chen *et al.* (1988) conclude that there was growth at the annual rate of 4%-5% in multi-factor productivity in state industry during the period from 1978 to 1985. Jefferson (1989) finds high marginal returns to labour within the state sector based on cross-section data for the year of 1984. Using panel data of observations on 769 SOEs from ten manufacturing industries, Liu and Zhuang (1998) find that the average cost efficiency level in the state sector increased by 1.18% per annum, during the decade from 1980 to 1989. By analysing a panel data set of 272 state enterprises, Li (1997) reveals that there were marked improvements in the marginal productivity of production inputs, with an average growth rate of 4.68% during 1980 to 1989. Using data gathered by the World Bank from 20 Chinese SOEs, Dollar (1990) finds that total factor productivity (TFP) grew rapidly in the 1980s, at an average rate of 4.7% per annum. Jefferson *et al.* (1992) find that the growth of productivity in the state sector amounted to 2.4% per annum and 4.63% in collectives during the period from 1980 to 1989. Comparing SOEs and township and village enterprises (collectives), Weitzman and Xu (1994) find an even larger gap of about 8% per annum in TFP between the two sectors, in favour of the latter.

However, some studies have come to conclusions that suggest that at times in the reform era China's state sector failed to achieve positive growth in productivity. Parker (1999) finds that multi-factor productivity improvement was not significant from 1980 to 1992 in SOEs, and that capital investment increased without relation to profitability, productivity, or a corresponding increase in output. McGuckin *et al.* (1989) conclude that multi-factor productivity in the state sector declined during 1980-1985, based on data from the 1985 Industrial Census of China. Similar arguments are also made by Woo *et al.* (1993) and by Kong *et al.* (1998). The latter based their study on data for 1990-1995, a more recent period than that covered by the other studies mentioned.

Although there is, therefore, no agreement on the effects of the reform process on SOEs' performance, the studies that include a comparison of SOEs with collectives do suggest that the collectives outperformed the SOEs. The objective of the statistical analysis of performance in this thesis was to add to knowledge about the relative efficiency of different ownership types, by using data from the CEI. It does not appear that the comparative performance of ownership types in the CEI has been studied previously. Also, my research looks at more recent data than the studies cited above, data for the mid and late 1990s, and is therefore able to shed light on how the more recent economic reforms (including the MES) have impacted on the relative economic performance of different ownership forms, at least in the CEI sector.

Because data for separate ownership types were not collected and published by the statistical department of the CEI until 1993, the research cannot examine the efficiency of SOEs compared to collectives and other ownership types in the 1980s and the early 1990s. It cannot, therefore, be tested whether the state sector in the CEI, like Chinese

SOEs as a whole, was outperformed by the collectives during this period. Consequently, the research compares labour productivity across different ownership types between 1993 and 1999 (the period used for calculating TFP was limited to a shorter period, for data reasons). As far as this time period is concerned, there are both advantages and limitations. One possible distortion that may be involved in most of the studies that compared SOEs with other ownership types in the 1980s lies in the use of mandatory prices. Government price controls affected the SOEs more than other ownership types (see Chapter 2 for a discussion of pricing system reform). After 1993, the proportion of mandatory prices decreased to a very low point. Only 5% of retail commodities and 15% of capital goods were sold at planned prices by 1993 (Lardy, 1994). The proportion of commodities under regulated prices was probably even lower afterwards with the deepening of economic reform. Consequently, the distortion to economic performance in the state sector caused by planned prices may, to a great extent, be avoided in this research. However, because of the exclusion of the period before 1993, the number of years used for comparing productivity, especially TFP, is quite small. This introduces some problems in terms of statistical testing, as discussed below.

In the rest of this section, a general picture of the relative position of each ownership type in the CEI is provided. After that, a comparative analysis of productivity across ownership forms is conducted. Joint ventures and wholly foreign owned firms are combined into one group labelled 'joint ventures' in the analysis.

4.2.1 General Comparison across Different Ownership Types

Tables 4.3, 4.4 and 4.5 show by ownership, the number of enterprises, the number of employees and the share of GVIO in the CEI, respectively, in the period from 1993 to 1999 and in the case of GVIO (for which there is larger data) from 1988 to 1999.

The number of SOEs and the number of employees in the state sector in the CEI decreased after 1993. A similar trend is also observed for the collective sector. In contrast, the number of limited liability companies and of joint venturers increased, in both absolute and relative terms. Besides these general trends, one important point merits further mentioning here, namely that the decreasing number of SOEs does not seem to have been due to the bankruptcy of loss-making firms. Although the Law of Bankruptcy was promulgated in 1988, it has scarcely impacted on state firms since then (Broadman, 1999). Rather, the decline in the number of firms is better explained by mergers among state firms organised by government, the transformation of some SOEs into joint ventures and limited liability companies (Simon, 1992).

Table 4.3 The Number of Enterprises by Ownership in the CEI

Source: *The Yearbook of the Chinese Electronics Industry*, various years
* The category of joint ventures includes wholly foreign owned firms
The figures in the parentheses are the number of wholly foreign owned firms.
Note: the total of the percentages of the four ownership types is not 100% because the table does not contain the ownership type labelled as 'other' in the *Yearbooks*.

Table 4.4 The Number of Employees by Ownership in the CEI

1999	733921	46.06	194941	12.23	348588	22.50	195650	12.28

Source: *The Yearbook of the Chinese Electronics Industry*, various years
* The category of joint ventures includes wholly foreign owned firms
Note: the total of the percentages of the four ownership types is not 100% because the table does not contain the ownership type labelled as 'other' in the *Yearbooks*.

Table 4.5 The Share of GVIO by Ownership in the CEI (%)

Total	

Source: calculated based on data from *The Yearbook of the Chinese Electronics Industry*, various years

* The category of joint ventures includes wholly foreign owned firms

Data for limited liability companies began only from 1992.

From Table 4.5 it can be seen that the share of SOEs in the CEI production declined after1989. In 1989 SOEs had the lion's share of the industry's output, but in 1999 its share was less than one-third. The collective sector appears to be a relatively minor contributor to CEI's output and there was a declining trend in its share after 1993. Limited liability companies recorded a 'U' shaped change in GVIO share after 1993. In contrast to all of the aforementioned ownership types, joint ventures and wholly foreign owned firms registered a steady rise in GVIO share, from 6.22% in 1988 to 44.57% in 1999. Since 1996 they have become the largest sector in the CEI in terms of output.

From the above general comparison across ownership types, it can be broadly concluded that the position of SOEs in the CEI has declined since 1993, while joint ventures and wholly foreign owned firms have became the major contributor to the industry's output. The following analysis of productivity presents further comparisons of performance across ownership types.

4.2.2 Comparison of Labour Productivity across Ownership Types

Labour productivity under different ownership forms was calculated at 1990 constant prices, based on official data from *The Yearbook of the Chinese Electronics Industry* (various years). The deflators used for output were based on the retail price indexes (RPI) obtained from *The Statistical Yearbook of China* (various years), in the absence of potentially superior electronics industry own-price deflators for output. The RPI obtained were at both national and regional levels. The deflators at the national level were used in the calculation of labour productivity and those at the regional level were used for the computation of TFP below, where the estimation of the weights of labour and capital was based on data at the regional level. In other words, the use of RPI keeps the results consistent.

Table 4.6 shows value added per employee by ownership. The employment figures used for calculating labour productivity were adjusted to exclude non-productive employees. Generally speaking, the growth rates of labour productivity calculated here are relatively higher than those found by other studies. For example, Jefferson, *et al.* (1992) found that labour productivity grew at an average 5.21% in the state sector and at 12.13% in the collective sector during the period from1980 to 1988.This is a different period to the one studied here, which is one explanation for the different results; but the much higher growth rates found in this research may due to the fact that the CEI has grown at a faster pace than other industries in China's economy throughout. For example, during the period from 1980 to 1992 the CEI registered an average annual growth rate of labour productivity at 16.43% (calculated based on data from *The Yearbook of the Chinese Electronics Industry*, various years).

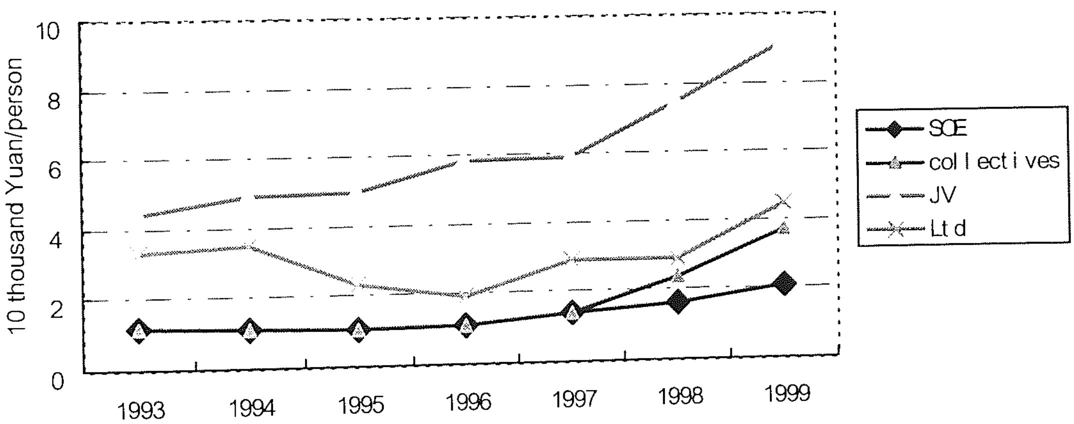
Table 4.6 Labour Productivity by Ownership in the CEI

	SOEs	Collectives	Joint ventures*	Limited liability companies

Note: value figures at 1990 prices
* The category of joint ventures includes wholly foreign owned firms
Source: calculated based on data from *The Yearbook of the Chinese Electronics Industry* and *The Statistical Yearbook of China,* various years

It can be seen from Table 4.6 and Figure 4.2 that SOEs and collectives in the CEI began from a relatively lower base of labour productivity, compared to joint ventures and limited liability companies. During the period examined, both SOEs and collectives recorded an increase in labour productivity. The productivity in the collective sector seems to have grown faster than in the state sector' however, and since the mid 1990s the gap between them has widened. Limited liability companies began with a higher labour productivity, partly because some of them were former SOEs having better performance. However, labour productivity in this sector fluctuated in the following years and a negative growth was recorded in 1995 and 1996 (the productivity figure for 1996 is particularly low and may represent under-reporting of output, reflecting data problems that infect all statistical work using Chinese official data). In most of the years studied, joint ventures and wholly foreign owned firms registered much higher labour productivity than all the domestic firms and enjoyed an average growth rate second to the collective sector.

Figure 4.2 Labour productivity of the CEI



4.2.3 Comparison of Total Factor Productivity (TFP)

Single factor productivity, such as labour productivity, is only a partial measure of efficiency. It is, therefore, less reliable than TFP because any increase in the latter reflects increasing efficiency taking into account all resources that are used. In the following part of the text, a comparison of TFP across different ownership types is conducted.

The General Method of Calculation of TFP and Data Issues

The model used in this research to calculate TFP involved first estimating the weights of capital and labour and was based on the method adopted by Jefferson *et al* (1992) for the Chinese economy. This method is derived from a Cobb-Douglas (CD) production function. Compared with the CES production function, the CD function is much easier to be linearised. In addition, it is less complex to estimate the output elasticities using the CD function than using a translog production form. However, one disadvantage of the CD production function is that it does not allow for the elasticities of factor inputs to vary over time. The weights obtained from the estimation are average ones over the period studied. This limitation should be born in mind when interpreting the results.

A set of panel data was used to estimate the output elasticities of labour and capital so as to calculate multi-factor productivity. Because of the lack of constant data both across ownerships and over time in the CEI, there are no time-series data long enough to estimate the output elasticities of labour and capital as was done in the study by Chen *et al.* (1988). Also, there are no cross-section data large enough, in terms of sample size, to conduct the precise form of estimating elesticities as undertaken by Jefferson *et al.* (1992). Instead, with available data from an information centre belonging to the Chinese Information Industry Ministry (in 1998 the CEI Ministry and the Chinese Telecom Ministry were merged into the Information Industry Ministry), a panel of observations of 30 provinces during 1995 to 1999 was used for each of the ownership types to compute the elasticities. Five years is a short period for a panel-data set and this limitation should be born in mind when interpreting the results of the estimation.

Production Function Estimates

The production function is specified as follows, after transforming the normal CD function into a linear form:

$$q_{it} = \alpha_O + \alpha_K k_{it} + \alpha_L l_{it} + \varepsilon_{it}, \qquad (1)$$

where i represents observations of industrial aggregates for the cross-section of provinces in China. The variables q, k and l represent logarithms of average enterprise values within each province for value added (q) at 1995 prices, net value of fixed assets (k) at constant prices, and the number of year-average employees (*l*). ε is a stochastic variable that is assumed to satisfy the classical regression model.

Equation (1) can be transformed into the following form:

$$(q-l)_{it} = \alpha_o + \beta q_{it} + \alpha_k (k-l)_{it} + e_{it}, \tag{2}$$

where $\beta = (\sigma - 1)/\sigma$. σ is a scale parameter, equalling $\alpha_K + \alpha_L$; $\alpha_k = \alpha_K / \sigma$; $\alpha_l = 1 - \alpha_k$; $\alpha_o = \alpha_O / \sigma$; and $e = \varepsilon / \sigma$. Since the factor coefficients have been normalized to sum to unity, the output elasticity estimates obtained from equation (2) are the appropriate weights to use for the calculation of TFP. Details of the transformation of Equation (1) into Equation (2) are provided in Appendix 4.2.

Using equation (2) in the estimation can minimise some problems with the data. First, unlike value added and capital, labour figures used were measured in physical terms, namely the number of employees. This is the only available data on labour at the regional level in the CEI. When the logarithm of average employment per enterprise is subtracted from both sides of equation (1), the inconsistency between *q*, *k* and *l*, in terms of the unit of measurement, no longer presents a problem. Secondly, the data used for estimation included non-industrial fixed assets and employees, in particular assets and employees in firms used for providing social welfare services. By using the ratio of capital-labour instead of the true level of inputs, this kind of measurement error and estimation bias, which may be especially important for SOEs, is reduced. This is so because the errors in the observed values of fixed assets and labour should be positively correlated.

One difference between the method used in my analysis and that in Jefferson, *et al* (1992) study related to the data. In this estimation panel data are used, while in Jefferson *et al*'s research cross-sectional data for Chinese industries were used. In addition, intermediate inputs were included in Jefferson *et al*'s model, but not in my model because of the lack of such data in the CEI. In order to offset the failure to include intermediate inputs, value added, instead of GVIO, was used as the measure of output.

Equation (2) was used separately to calculate output elasticities for traditional SOEs, collectives, joint ventures and wholly foreign owned firms, and limited liability companies. The sizes of the observations for these four sectors were different because some ownership types had no presence in some provinces. Also, for each of the ownership types, some of the extreme observations that probably reflect measurement errors in the official data, were removed. By using the sample comprising the more efficient observations, the results of the estimations are expected to be more broadly representative of the true situation in the sectors studied. In the initial computations, it was found that the data suffered from a Durbin-Watson problem, i.e. there was evidence of positive serial correlation. Therefore, data transformation was conducted. The results of the initial estimations and the process of data transformation are shown in Appendix 4.3. The results of the final computations are reported in tables 4.7, 4.8, 4.9 and 4.10.

Table 4.7 Estimation Results for SOEs

Total panel of observations 126				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	0.24	0.029692	8.087599	0.0000
k-l(α_k)	0.692	0.224797	3.078848	0.0027
q(β)	0.089	0.003735	23.81686	0.0000
R-squared	0.908897	Prob(F-statistic)		0.000000
Adjusted R-squared	0.907018	Durbin-Watson statistic		1.735630
F-statistic	483.8638	Stability test		F=4.75 (3.95)#

The figure in the parenthesis is the critical value at the 1% level.

Table 4.8 Estimation Results for Collectives

Total panel of observations 108				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	0.518	0.134812	3.842375	0.0002
k-l(α_k)	0.598	0.207841	2.877216	0.0049
q(β)	0.083	0.003677	22.57499	0.0000
R-squared	0.979463	Prob(F-statistic)		0.000000
Adjusted R-squared	0.979075	Durbin-Watson statistic		1.905332
F-statistic	2527.659	Stability test		F=6.86(3.95)#

The figure in the parenthesis is the critical value at the 1% level.

Table 4.9 Estimation Results for Joint Ventures*

Total panel of observations 113				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	1.44	0.923075	1.561180	0.1214
k-l(α_k)	0.622	0.228193	2.726346	0.0075
q(β)	0.078	0.004933	15.87890	0.0000
R-squared	0.975369			0.000000
Adjusted R-squared	0.974921	Durbin-Watson statistic		2.228345
F-statistic	2177.969	Stability test		F=1.61(3.95)#

The figure in the parenthesis is the critical value at the 1% level.

* The category of joint ventures includes wholly foreign owned firms

Table 4.10 Estimation Results for Limited Liability Companies

Total panel of observations 106				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C (α_o)	-0.43	2.965523	-0.145025	0.8849
k-l(α_k)	0.710	0.171853	4.133321	0.0001
q(β)	0.081	0.009462	8.605461	0.0000
R-squared	0.956777	Prob(F-statistic)		0.000000
Adjusted R-squared	0.956012	Durbin-Watson statistic		2.274463
F-statistic	1250.676	Stability test		F=0.63(3.95)#

#The figure in the parenthesis is the critical value at the 1% level.

The results show that coefficients β and α_k are significant at the 1% level in all of the estimations. However, the results of the stability tests reveal that the estimated factor share parameters remain constant during the period studied in the sectors of limited liability companies and firms with FDI, but not for the state and collective sectors. Although the CD production function assumes constant elasticities of factor inputs, the results do suggest that there was structural change in the collective and state sectors during 1995 to 1999. In order to get more reliable weights of inputs, estimations were conducted for the two sectors in two sub-periods, in which the factor share parametres were constant, as shown in Table 4.11. It can be seen that the weights of capital input in the two sectors were different during the different sub-periods. In addition, in both traditional SOEs and collectives there were constant returns to scale in the earlier sub-period but increasing returns to scale afterwards.

Table 4.11 Estimation Results for SOEs and Collectives in Sub-periods

		Variable	Coefficient	Prob.	
SOEs	95-96	C (α_o)	1.022	0.051	
		k-l(α_k)	0.657	0.000	D-W statistic: 1.71967
		q(β)	0.056	0.162	Stability test: F=0.594(4.13)#
	97-99	C (α_o)	0.072	0.000	
		k-l(α_k)	0.701	0.000	D-W statistic: 1.8104
		q(β)	0.092	0.000	Stability test: F=0.657(3.95)#
Collectives	95-97	C (α_o)	0.939	0.025	
		k-l(α_k)	0.559	0.000	D-W statistic: 1.8156
		q(β)	0.022	0.4587	Stability test: F=1.0554(4.13)#
		C (α_o)	-0.045	0.388	
		k-l(α_k)	0.6073	0.000	D-W statistic: 1.6485
		q(β)	0.0913	0.000	Stability test: F=0.071(4.13)#

#The figures in the parentheses are the critical values at the 1% level.

α_l, calculated through $\alpha_l = 1 - \alpha_k$, has values of 0.378 for joint ventures and wholly foreign owned firms, and of 0.2896 for limited liability companies. If α_k in Tables 4.7 and 4.8 are used, α_l is 0.308 for SOEs and 0.402 for collectives. If the factor share parameters estimated in sub-periods are used, α_l for SOEs is 0.343 in 1995 and 1996, 0.299 during 1997 to1999; α_l for collectives is 0.441 during 1995 to 1997 and 0.393 in 1998 and 1999. Comparing the weights of input factors between traditional SOEs and firms with FDI, it seems that the latter are less capital intensive than the former. This appears to be contrary to a common belief that domestic-owned firms are more labour intensive than foreign-owned firms in China. One possible explanation to this is that the depreciation rates of fixed assets used in China's state sector are lower than that in joint ventures and wholly foreign owned firms (Xie, *et al.*, 1999). This will tend to lead over-estimates of the capital stock in the state sector and the SOEs may therefore seem to be more capital intensive than they really are.

A Comparison of TFP across Ownership Types

α_k and α_l obtained above were used as weights for combining capital and labour into a composite input measure (shown below as equation (3)) used to calculate TFP. Because of the model and the data used, it is not possible to calculate absolute levels of TFP in each of the years studied; but it still allows the growth rates of TFP to be computed.

Input and output data used for calculating TFP growth for each ownership type are presented in Table 4.12. Figures in columns (1) and (2) are, respectively, the number of employees and the net value of fixed assets at current prices (in RMB 10,000Yuan), both of which have been adjusted to exclude non-industrial resources. Column (3) consists of net value figures of fixed assets at constant1995 prices, also in RMB10000Yuan. The deflators used to transform the nominal net values of fixed assets to real ones at 1995 constant prices were based on the price index for fixed asset investments obtained from *The Statistical Yearbooks of China* (various years)[2]. Due to the lack of data on the ratios of construction investment goods and the purchases of new equipment and tools for the CEI, a common deflator of fixed assets was employed in the computation and is labelled 'DEK' in column (6). This may not be appropriate since different kinds of fixed assets may have different deflators. But in the absence of relevant data, the estimates are the best attainable. Columns (4) and (5) contains figures of value added at current prices and those at constant 1995 prices, respectively. The deflators used here, like those in the calculation of labour productivity, were based on the RPI at the national level and are labelled 'DEVA' and presented in column (7).

With the adjusted input and output data and the estimates of the elasticities of capital and labour, comparative rates of sectoral productivity were calculated using the following expression:

$$tfp = dva - \alpha_k dk - \alpha_l l\,, \tag{3}$$

where tfp is the exponential growth rate of total-factor productivity and the right-hand variables are, respectively, the exponential growth rate of real value added, of real net value of fixed assets, and of the number of employees, over the period studied. For the sectors of traditional SOEs and collectives, TFP growth rates were calculated both according to the weights obtained from tables 4.7 and 4.8; and according to the reliable elasticities estimated for sub-periods, which are marked by # in table 4.13. It can be seen that the results changed upwards, but not much when the sub-period weights were used.

Table 4.12 Original and Adjusted Data by Ownership Types, 1995-1999

Source: *The Yearbook of the Chinese Electronics Industry* and *the Statistical Yearbook of China*, various years.

L: the number of employees (excluding non-industrial labour)

K: net value of fixed assets at current prices (excluding non-industrial assets), in average of year-end figures

DK: net value of fixed assets (excluding non-industrial assets) at constant 1995 prices

VA: value added at current prices

DVA: value added at constant 1995 prices

DEK: deflator of fixed assets

DEVA: deflator of value added.

[2] Correctly, where price changes reflect a change in the quality of capital goods, the price deflators will misrepresent the true change in nominal values. However, given the short period involved , this should not represent much of a problem for this study.

Table 4.13 Exponential Growth Rate in Percentage per Annum by Ownership Types

Ownership	dva =	$\alpha_k dk$ +	$\alpha_l l$ +	**tfp**	(tfp=se+tech) se	tech
SOEs	11.0311	3.3426	-2.069	**9.7577**	1.822	7.936
		(4.835)	(-6.705)			
SOEs#				**9.8387**	1.105	8.7337
Collectives	18.4809	3.1442	-5.43	**20.7668**	2.892	17.875
		(5.2599)	(-13.500)			
Collectives#		3.184	-5.757	**21.0535**	1.24	19.8135
Joint ventures	27.8684	12.0597	4.7864	**11.0223**	1.953	9.069
		(19.386)	(12.666)			
Limited liability companies	33.8596	18.9218	5.0969	**9.8409**	0.339	9.501
		(26.634)	(17.6021)			

Note: figures in parentheses are exponential growth rates of factor inputs.
* The category of joint ventures includes wholly foreign owned firms
#TFP growth rates calculated according to the sub-period weights.

The growth rates of TFP shown in the table are, in general, much higher than those reported in the earlier studies of TFP in China, mentioned above. One possible explanation is that most of the existing studies focused on productivity growth before 1993, when fewer elements of a market economy existed in China. Another possibility relates to the sample of firms or, to put it in another way, the choice of the CEI for analysis. Firms in this industry during the period of 1995-1999 may well have been exposed to market competition on a bigger scale than the industrial economy in China as a whole. Because there are few existing studies of TFP covering the same period, it is hard to conclude whether or not the higher TFP growth rates found in this study are a true reflection of performance in the CEI between 1995 and 1999. Confirmation must await further research using a longer time period, superior methods of modelling, or different panel data. It is worth noting, however, that the TFP growth rates are consistent with those for labour productivity reported earlier in this chapter. Both series suggest very high productivity growth rates with labour productivity growth exceeding TFP growth during the period studied. Usually labour productivity growth exceeds TFP growth because of capital for labour substitution. Errors in official data for output and labour input will affect both series simultaneously.

The following are the main findings from the results of table 4.13. The major impetus to output growth in the sectors of joint ventures and limited liability companies came from a rapid expansion of capital. This is especially obvious in the case of limited liability companies, where the expansion of fixed assets accounted for more than a half of incremental output. In these two sectors, productivity growth was the second largest contributor to output growth, with joint ventures and wholly foreign owned firms relying more on this source. The trends in SOEs and collectives in the CEI are different. In both of the sectors there was a negative growth in the number of employees over the period studied, caused mainly by the campaign of labour streamlining in the second half of the 1990s. The decrease of employees contributed to the growth of labour productivity (see the section on labour productivity) and resulted in a negative share of labour in incremental output. The negative growth in labour input means that part of the recorded increase in labour productivity resulted from a growth in TFP, and not simply from a substitution of capital for labour. This is most obvious in the collective sector, where the growth of TFP exceeded output growth. Although it accounted for a lesser share of incremental output in SOEs and collectives than in the other two sectors, expansion of fixed assets was a more important contributor to output growth for state firms than for collectives.

Compared across ownership forms, the collective sector recorded the highest growth in TFP, suggesting that it was the most dynamic sector in the CEI in the second half of the 1990s. By contrast, SOEs achieved the lowest growth in efficiency in terms of TFP over the same period. Limited liability companies, as a whole, seem to have achieved a slightly higher gains in terms of TFP than SOEs. Unfortunately, because we can not distinguish those companies that were former SOEs from those that were not, it is not certain whether the corporatised SOEs within the limited liability category had higher multi-factor productivity growth than the traditional SOEs, or, therefore, whether the reform measure of corporatisation had a positive effect on efficiency. What we can say is that, comparing the TFP growth with SOEs and limited liability companies over the period studied (i.e. 9.75% or 9.83% p.a. [depending upon the weights used] and 9.84%

p.a.), there is no obvious sign of any significant different in TFP increase; even though the experiment of the MES was mainly carried out among SOEs having better performance (Lin, 2001) and at least half of the limited liability companies in the CEI were former SOEs (*The Yearbook of the Chinese Electronics Industry*, 1997). The results also suggest that joint ventures and wholly foreign owned firms in the CEI were more efficient than the SOEs and the limited liability companies in terms of TFP growth, but they achieved lower product growth than the collectives.

TFP growth can be decomposed, as labelled as 'se' and 'tech' in the last columns of Table 4.13. 'se' was calculated as β(dva-n), where β has been estimated through equation (2) (see Tables 4.7-4.11) and dva and n are exponential rates of growth for deflated value added and the number of enterprises. The residual is represented by 'tech', which results from technology change or better management of resources, or both. The results show that, although scale economies have made a consistent contribution to growth and productivity change, the increase in TFP found here is mainly attributable to the combination of technology advances and improvement in resource management. In other words, the increase in TFP is primarily attributable to increases in output per unit of combined factor input, holding enterprise scale consistent.

As also undertaken in Jefferson *et al.* (1992), marginal returns to factors were calculated. In a market economy, interaction between income-seeking buyers and sellers tends to equalise marginal returns to any resource used in several sectors of the economy. A successful programme of economic reform, which seeks to establish market principles in economic life, should generate effects towards convergence in the marginal revenue product of similar inputs across different sectors. Tests for the convergence of factor returns, therefore, offer an assessment of progress towards establishing a market economy in China, as intended by the government. The following set of equations were used to calculate the nominal returns to capital and labour for all the four sectors.

$$\begin{aligned} MRP_{Li} &= \alpha_L (VA_i / L) \\ MRP_{Ki} &= \alpha_K (VA_i / K) \end{aligned} \qquad (4)$$

Where VA, K and L are from table 4.12; and the output elasticities α_K and α_L are calculated according to the expressions $\alpha_K = \alpha_k /(1/(1-\beta)$ and $\alpha_L = \alpha_l /(1/(1-\beta)$.

The results are shown in table 4.14. It can be seen that there is no obvious sign of convergence in marginal returns to input factors across ownership types. This is not too surprising because China's capital markets remained strongly segmented and labour markets are less developed in the 1990s (Wang, 1998; also see Chapter 2 and the discuss in Chapters 6 to 9 below). The pre-mature factor markets in China's economy seem so far to have generated inadequate pressure towards convergence in marginal factor returns.

Table 4.14 Nominal Marginal Revenue Products: Labour and Capital

		MRP-L		MPR-K	
		mrp-l	index-l	mrp-k	index-k
SOEs	1995	0.541743	1	0.45224	1
	1996	0.606009	1.118627	0.428783	0.94813
	1997	0.78266	1.444707	0.493853	1.151755
	1998	0.899808	1.660949	0.486793	1.076404
	1999	1.112791	2.054093	0.5569	1.231424
collectives	1995	0.713541	1.317121	0.638997	1.412958
	1996	0.823551	1.520187	0.661602	1.462944
	1997	1.025784	1.893487	0.692195	1.530592
	1998	1.682839	3.106341	0.828661	1.832347
	1999	2.59116	4.783003	1.042156	2.30443
Joint Ventures*	1995	3.215255	5.935017	0.573753	1.26869
	1996	4.002791	7.388723	0.621848	1.37504
	1997	4.102258	7.572328	0.565432	1.25029
	1998	5.050146	9.322028	0.594531	1.314635
	1999	5.967917	11.01613	0.77419	1.7119
Limited Liability companies	1995	1.159299	2.139941	0.651204	1.439951
	1996	1.006017	1.857	0.581059	1.284846
	1997	1.542437	2.847173	0.696643	1.540426
	1998	1.497287	2.763831	0.605063	1.337923
	1999	2.109847	3.894551	0.785468	1.736838

* The category of joint ventures includes wholly foreign owned firms

4.3 Conclusions

This chapter began with a review of the development of the CEI since 1979. As part of the Chinese industrial economy, the CEI experienced various reform measures that were detailed in Chapter 2. These measures, together with the open door policy brought changes to this industry, such as a decline in regulated prices and the growth of non-state owned enterprises.

Of nine sub-industries in the CEI, the consumer electronics sector has been the backbone of this industry since the early 1980s. Vast demand for consumer electronic products in the 1980s and the early 1990s created large profit margins and consequently attracted a large number of firms into the sub-industry. However, a duplication of production capacities, combined with the freeing of prices of consumer products in the 1990s, triggered price wars among firms. In response, the number of firms producing consumer electronics, especially those producing TV sets, decreased dramatically. In China, the consumer electronics industry is probably one of the sectors that have faced the most fierce market competition since the late 1980s.

Based on data from the CEI, the chapter has focused on comparisons of performance across ownership types. The share of SOEs in CEI production decreased from more than two-thirds in 1988 to less than 30% in 1999. By contrast, joint ventures and wholly foreign owned firms gradually obtained the dominant position. The contribution of this sector to the industry's output increased from 6% in 1988 to about 45% in 1999. The collective sector seems to play a more minor role in the CEI in terms of its share in the CEI's output. The number of limited liability companies in the CEI rose in the 1990s, but the share of these firms in the industry's production fluctuated.

The statistical analysis of labour productivity in the chapter showed that, generally, non-state owned enterprises in the CEI have higher labour productivity and the gap between them and traditional SOEs seems to be widening. During the period from 1993 to 1999, labour productivity in the SOEs grew at an average annual rate of 11.32%, compared with a remarkable growth rate of 25.18% in the collective sector. Joint ventures and wholly foreign owned firms registered a little higher labour-productivity growth than that of the SOEs. Although starting with a very high *level* of labour productivity, limited liability companies in the CEI did not continue with a relatively high *growth rate*. During the period from 1993 to 1999 labour productivity in this sector recorded an annual growth of 10.24%, still impressive but the lowest among the four ownership types.

TFP growth rates were computed based on factor weights obtained from a two-input Cobb-Douglas production function and panel data for 1995 to 1999 for the CEI. Although the method used did not provide figures on absolute levels of TFP, the results showed that the collective sector in the CEI seems to have achieved an extraordinarily high TFP growth rate, of over 20%. This suggests that, although their share in industrial output was small, the collectives were the most dynamic sector in the CEI in the second half of the 1990s in terms of raising efficiency. By contrast, the traditional SOEs recorded the lowest growth rate in TFP among the four ownership forms, with an annual rate less than half that of the collectives. The grow rate in TFP achieved by joint ventures and wholly foreign owned firms fell in between the SOEs and the collectives. As with labour productivity growth, limited liability companies in the CEI lagged behind the collectives and the firms with FDI. Although it is not possible to distinguish in the Chinese official data between limited liability companies that were transformed from SOEs and those that were not, the results do suggest that there was no significant difference in TFP growth rate between the categories of traditional SOEs and limited liability companies. Considering that most of the SOEs that were chosen for the MES experiment were those having the relatively better performance and at least a half of the limited liability companies in the CEI are former SOEs, the small discrepancy in TFP growth between SOEs and limited liability companies suggests that, if the MES reform measure has had a positive effect on the performance of firms, the impact has, so far, been limited.

It should be noted that there are limitations to the statistical analysis presented in this chapter. The calculations conducted were based on Chinese official data, which are generally regarded as containing error. In addition, the period covered by the analysis is relatively short. Further efforts should be made to collect data from more reliable sources and data covering longer period, in order to obtain more efficient estimates and to form a more accurate picture of longitudinal trends in productivity growth.

The statistical analysis of productivity reported in this chapter provides some insights into changes in the CEI, but it can, at least, only present a partial understanding of changes in firms' performance following the reform measures implemented in the 1990s. To provide a fuller picture, firm-level data were collected on behaviour and management practices in the CEI and the results are reported in the next few chapters. Chapter 5 focuses on the findings from a questionnaire survey. Chapters 6 to 9 report a series of detailed case studies, based on interviews with senior managers in 17 consumer electronics firms.

5. The Questionnaire Survey of Firms in the Chinese Electronics Industry

5.1 Introduction

Economic reform in China after 1979 proceeded slowly and cautiously. In the 1980s there was a gradual withdrawal of central directives and delegation of some input and output decisions to the management in SOEs. A main feature of the reforms at that stage was the Contract Management Responsibility System (CMRS), whose primary objective was to increase productivity without dismantling state ownership (see Chapter 2 for a detailed discussion of the CMRS). The short-termism associated with the CMRS and its failure to revive many SOEs led to the introduction of new reform measures in the 1990s, and in particular the Modern Enterprise System (MES). Under this reform, SOEs are gradually being corporatised with the intention of creating clearly defined capital structures and improved corporate governance (Lin, 1995; Ji, 1998, ch.8). Some of the corporations have obtained share listings in the new stock markets of shanghai and Shenzhen, although majority state-ownership tends to remain. Alongside these 'reformed' enterprises large numbers of traditional, non-corporatised SOEs still exist. Between a half and two-thirds of these enterprises are reported to be operating at a loss (Harris and Lockwood, 1997).

In this and subsequent chapters, the data collected during my fieldwork in the first half of 2000 are discussed. This fieldwork was based on the theoretical framework presented in Chapter 3 with a view to appraising China's enterprise reforms of the mid and late 1990s. This chapter reports the results of a postal questionnaire survey of the Chinese electronics industry (CEI), undertaken in late 1999 and early 2000 (the questionnaire is reproduced in the Appendix to this chapter). The main aim of the survey was to provide a general understanding about management and organisational issues in firms of the CEI in the new reform era. This survey also related firms' behaviour to their ownership form, so that the assessment in this thesis of the new round of economic reform is based not simply on 'absolute' changes taking place in the state sector, but on the 'relative' degree of change in comparison with other ownership types. After the broad picture provided by the questionnaire survey, detailed case studies of 17 firms in the CEI are reported in the following four chapters.

The text of this chapter is organised as follows. The next section details the research method and questionnaire design. The following section provides an analysis of the results, covering firms' objectives, management and personnel issues, organisational structures, internal communications, output and input transactions and the funding of investment. These topics were derived from a review of the literature on the reform of socialist economies and institutional arrangements in Chapter 3. In the last section conclusions are drawn.

5.2 Questionnaire Design and Other Issues

5.2.1 Questionnaire Design

The questionnaire consisted of 27 questions for non-limited-liability companies and 31 for limited liability/joint stock companies. Two broad types of questions were asked, namely questions of 'fact' and questions of 'opinion'. Two types of choices were used. One was to ask the respondents to choose what they think was true. The other was to ask them to identify and rank relevant choices. Since the research looks at changes in the management and organisation of enterprises, a number of questions were designed to include choices concerning both the situation in 1999 and five years earlier.

Such a design, involving asking questions relating to attitudes and behaviour in earlier years, may mean some limitations in terms of response rate and reliability of the information provided by the firms. Ideally, a questionnaire survey regarding situations at two points in time should be conducted to the same enterprises twice, in 1994 and again five years later. But this proved impractical for this PhD project undertaken from 1998. The limitation of human memory is improved in this research by crosschecking data from the questionnaire survey and the subsequent face-to-face interviews. As shown in this and following chapters, the answers provided are broadly consistent. The problem of response rate relates to the resulting number of questions being higher, because respondents are asked for details of the situation at two points in time. This means that the managers have to spend relatively more time completing the questionnaire. Given that managers in China are becoming more and more busy, they may be reluctant to respond to a relatively complex questionnaire. The expected result is a decreased response rate.

5.2.2 Sampling

Five hundred electronics enterprises were chosen from a total population of 3,167 firms in the CEI. *The Yearbook of the Chinese Electronics Industry* (1999) was used in conjunction with *The Name List of Chinese Electronics Enterprises 1998,* to obtain the names and addresses of the firms. In selecting the firms to survey, two characteristics were considered. Firstly, the form of ownership, namely SOEs, collectives, joint ventures, wholly foreign-owned firms, limited liability companies within the framework of the MES and private firms. These are the ownership classifications used in the Yearbook. Secondly, according to the type of product or sub-sector of the CEI. In each case firms were selected randomly; but subject to the number of firms of each ownership type being proportional to the number in each ownership classification within the Yearbook and within each ownership type the product sector or sub-sector being proportionately represented. The intention was to obtain a representative sample of each ownership type. The result was questionnaires issued to 193 SOEs, 148 collectives, 103 joint ventures, 11 wholly foreign-owned firms, 39 limited liability companies and six private firms.

5.2.3 Response Rate and the Respondent Firms

The questionnaires were sent from the UK to China in December 1999. Of the 500 firms to which the questionnaire and a subsequent copy and reminder were sent, 58 usable questionnaires were returned. This means a response rate of 11.6 per cent. This low response rate must be borne in mind when interpreting the results. Some resulting bias cannot be ruled out, although there are no grounds for believing that the findings are highly unreliable - they are consistent with the interview findings and some existing studies (for example, Child and Lu, 1989; Chow, 1992; Pan and Parker, 1997; Gu, *et al*, 1999). The low response rate can be attributed to two main factors. The first is the time delay between the publication of the sources used to obtain the names and addresses of firms and the date the survey was conducted. After sending out the questionnaire, more than 20 pieces of mail were rejected by the Chinese post office because the recipient firms had changed their addresses and four were returned because the firms had closed. It is to be expected that a number of other firms contacted did not reply because they were no longer in existence, had merged or had moved location. Secondly, undertaking questionnaire surveys in China that achieve high response rates is always difficult because of cultural factors, including pervasive secrecy. This tendency has been reinforced recently by the government reminding firms of the need to keep enterprise information confidential. Therefore, a low response rate was to be expected. At the same time, however, there was no other way than through a postal questionnaire to survey a large number of Chinese electronics firms distributed widely across China.

The questionnaires were addressed to the chief executive or person of similar status within each enterprise. The responses, therefore, represent the views of 'top management'; although it is possible that completion of the questionnaire was delegated to a subordinate. Table 5.1 provides details of the answers according to ownership type. As only one reply was received from a wholly foreign-owned firm and one from a private firm, in reporting the results below the wholly foreign-owned and joint venture categories and the limited liability company and private firm categories are combined. Figures in the table show that the response rate of limited liability companies was higher than their sample share. One possible explanation for this is that some of the SOEs and collectives had recently changed their ownership forms because of corporatisation. For example, answers from the completed questionnaires show that nine of the respondent limited liability companies were former SOEs, and three were former collectives. The same fact may contribute partly to the relative lower response rate of SOEs and collectives, compared to their share in the sample.

The second part of the table shows the product distribution of the sample firms and the respondents. As can be seen, with the exception of radar equipment, replies were received from firms in all of the main sub-sectors of the CEI as detailed in the Yearbook.

Table 5.1 Distribution of Sample and Respondent Firms

	Sample	Respondent
Ownership distribution		
State-owned enterprises (SOE)	193	17
Collectives (COL)	148	12
Joint ventures (JV)	103	9
Wholly foreign-owned firms	11	1
Limited liability companies in the framework of the MES (Ltd)	39	18
Private firms	6	1
Total	***500***	***58***
Product distribution		
Radar equipment	7	0
Telecommunication equipment	39	2
Broadcasting, TV and Radio equipment	65	13
Computer manufacturing	37	2
Electronics components	122	10
Electronics measuring instruments	35	9
Special electronics equipment	65	6
Electronic devices	94	14
Other	36	2
Total	***500***	***58***

5.3 Analysis of the Results of the Survey[3]

Besides the ownership forms and product types of the respondent firms, other general information regarding the size of firms and their superior government authority were obtained. Table 5.2 shows the details.

It seems that among the respondent firms the limited liability companies were the largest in size. Two of the three large-sized companies and five of the six medium-sized companies were former SOEs. This bias in size reflects the fact that the state firms chosen for corporatisation in China so far have tended to be the relatively larger ones. The smallest average size was found in the collective sector, where more than four-fifths of the respondent firms were small.

[3] A shortened version of this section appears in Zhang and Parker (2001).

Table 5.2 The Size of the Respondent Firms and the Superior Authority to Which They Report

	Number of firms	% of total cases within each ownership form
SOEs	**17**	
Size: Small	9	52.9
Medium	8	47.1
Large	0	0
Superior authority: Central government	1	5.9
Local government	16	94.1
None	0	0
Collectives	**12**	
Size: Small	10	83.3
Medium	1	8.3
Large	1	8.3
Superior authority: Central government	0	0
Local government	8	66.7
None	4	33.3
Joint ventures	**10**	
Size: Small	5	50
Medium	4	40
Large	1	10
Superior authority: Central government	0	0
Local government	5	50
None	5	50
Limited liability companies	**19**	
Size: Small	10	52.6
Medium	6	31.8
Large	3	15.8
Superior authority: Central government	1	5.2
Local government	11	57.9
None	7	36.9

Note: According to the latest Chinese official criteria, the boundary between large-sized firms and medium-sized firms is 500 million Yuan for both capital and annual sales revenues, and the boundary between medium-sized enterprises and small ones is 50 million Yuan.

In terms of the superior authorities to which the respondent firms were subordinate, it is not surprising that the joint ventures seemed the more distanced from government agencies than the other ownership types. Unsurprisingly, the SOEs were most subject to supervision from government agencies, with none of them freed from superior authority. On the surface, the limited liability companies came next to the joint ventures in the degree of freedom from government departments: seven of the 19 companies had no supervisory government agency in 1999. However, when these seven companies were further studied, only one of them had been transformed from a state firm. The other six included one private firm, three companies transformed from collectives and three firms that had been limited liability companies before 1994. This may suggest that corporatisation of SOEs has not necessarily distanced the firms from government agencies, though the sample is small.

The results from the other questions in the questionnaire are discussed in the rest of this section, under the sub-headings of objectives, management, employment, structure, and inputs and outputs. These topics were derived from the five management and organisational issues identified to examine potential changes at the firm level when the institutional environment of firms changes, as discussed in Chapter 3. Answers to questions 8, 23 and 25 of the questionnaire (see the Appendix 5.1 to this chapter) are not reported in the thesis because they provided no clear pattern of results.

5.3.1 Firms' Objectives

Before the economic reforms, as the name of firms in China, *Danwei*, suggests, firms were not only production units but, importantly, communities for the workers and their families. *Danwei* were expected to maximise employment, guaranteeing a minimum standard living. They delivered a variety of social welfare services, such as health care and education, to the workers and their families. At the same time, they served as an intermediary through which government could influence and even control every individual. Firms were not evaluated in terms of their profits - indeed the word 'profit' was forbidden in the pre-reform era - but in terms of how well they maintained social stability and fulfilled the production quotas set by the state.

During the 1980s, reforms, especially the CMRS, gradually gave management more autonomy in production decisions. Profits appeared in management contracts to evaluate the performance of firms, along with output and investment criteria (Child, 1996; Pan, 1997; Shi, 1998; also Chapter 2 above). Also, the management of firms increased the amounts set aside to pay wages, although this might not be stated publicly (Parker, 1999). Nevertheless, fulfilling the tasks set down in the management contracts with upper bureaux remained one of the primary objectives of management (Pan and Parker, 1997, p.49).

Under the MES, which has been implemented since the mid 1990s, it was expected that firms would transform completely from *danwei* into 'enterprises' operating according to market signals. For more and more firms, profits should have become important in performance evaluation. In most cases, however, change seems to have been gradual. The government was concerned to avoid widespread unemployment and resulting social instability; for example, occasional guidelines were issued to SOEs to re-employ redundant workers (Benson and Zhu, 1999).

In order to examine the extent of change in the CEI, management were asked a question about what were the three most important objectives of their firm in 1999 and in 1994. Among the 58 returned questionnaires, 56 gave answers concerning objectives at both points in time, one only regarding the objectives by 1999 and another did not answer this question at all.

In total 15 objectives were mentioned by the respondents. The answers are summarised in two ways. Firstly, according to the three most important objectives mentioned, with three points assigned to the most important objective, two to the second and one point to the third objective. Aggregated scores were then worked out for each of the ownership types (shown in the right-hand part of Table 5.3), and the three highest scored objectives are shadowed. Secondly, according to the most important objective only (the number of cases for each objective and ownership form is shown in the left-hand part of the table). A similar arrangement is adopted below when reporting a number of the other results. Not every objective mentioned by the respondent firms is presented in this table. Those that were not cited as the most important objective and at the same time had an aggregate score of less than three were excluded from the table.

In 1994, enlarging output, increasing profit and increasing employees' incomes were the three most important objectives for the joint ventures, the collectives and the limited liability companies, with increasing profit as the most highly scored goal. For the SOEs, the most important objective was increasing output, and fulfilling the tasks set by upper bureau was ranked second. This suggests that in 1994 the SOEs paid slightly more attention to the plans of upper bureaux than to profits earned. By 1999 there had been a distinct change. Output, profits and employees' incomes were now ranked the most important objectives, irrespective of the ownership type. All the four types of ownership put profit making in first place; although the extent of market orientation still varied across ownership forms. For example, for the SOEs fulfilling tasks from government authority had a rather high score, close to that of the objective of increasing employees' incomes, suggesting that the upper authorities still remained influential in determining objectives.

Table 5.3 Main Objectives of Firms in 1994 and 1999

		The main objective						The aggregate score for the three objectives					
	Objective	**JV**	**SOE**	**Col.**	**Ltd**	***Ltd(s)***	***Ltd(o)***	**JV**	**SOE**	**Col**	**Ltd**	**Ltd(s)**	**Ltd(o)**
1994	Output volume	3(30)	3(17.7)	5(45.5)	6(33.3)	4(44.4)	2(22.2)	15	19	18	30	*16*	*14*
	Profit	5(50)	2(11.8)	5(45.5)	6(33.3)	2(22.2)	4(44.4)	23	17	21	30	*13*	*17*
	Relation with locals	1(10)	1(5.9)		1(5.6)	1(11.1)		5	5	6	5	*3*	2
	Employees' incomes		1(5.9)		1(5.6)	1(11.1)		7	8	8	14	*7*	*7*
	Tasks in management contract		5(29.4)		2(11.1)	1(11.1)	1(11.1)		16	5	10	*7*	*3*
	Other tasks from superior authority		3(17.7)	1(9.0)	2(11.1)		2(22.2)	2	18	5	10	*4*	*6*
	Using local labour		1(5.9)						3		1		*1*
	Product quality	1(10)						5					
	Decreasing losses												
	Innovation		1(5.9)						3				
	Total cases	*10*	*17*	*11*	*18**	*9*	*9*						
1999	Output volume	5(50)	3(17.7)	2(16.7)	2(10.5)	1(11.1)	1(10)	12	18	13	24	*12*	*12*
	Profit	4(40)	5(29.4)	8(66.7)	14(73.7)	6(66.7)	8(80)	24	24	30	49	22	27
	Relation with locals	1(10)	1(5.9)					5	4	3	2		2
	Employees' incomes		1(5.9)		1(5.2)	1(11.1)		8	11	12	21	*13*	8
	Tasks in management contract		2(11.8)	2(16.7)					9	8			
	Other tasks from superior authority		1(5.9)					1	10	2	1		*1*
	Using local labour		1(5.9)						3				
	Product quality				1(5.2)		1(10)	1			4	*1*	*3*
	Decreasing losses		1(5.9)						3				
	Innovation								3				
	Total cases	*10*	*17*	*12*	*18**	*8*	*10*						

Figures in the parentheses are the percentage of the total cases in the relevant ownership group.
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
*One limited liability company did not respond to this question.

If the limited liability companies are divided into two sub-groups, those that were not SOEs in 1994 (labelled Ltd(o))and those that were (Ltd (s)), objectives of the former sub-group in 1994 seemed more like that found in collectives and the joint ventures than in the case of the latter sub-group. The latter sub-group had objectives more akin to those held in the non-corporatised or traditional SOEs. This is perhaps not too surprising because the Ltd(s) *were* SOEs in 1994. Interestingly, by 1999, after their restructuring, the Ltd(s) appear to have objectives more like the non-state ownership types. More attention was given to profit earning by the Ltd(s). The percentage of firms from this sub-group that cited profits as their primary objective increased from 22.2% in 1994 to 75% in 1999, while the traditional SOEs only achieved an increase of18% in this respect. This suggests that corporatising SOEs had an impact on management objectives, as the government intended. The transformed SOEs seem to have geared their goals to market competition at a greater pace than the non-transformed ones. The traditional SOEs, which continued to operate under the old management system, appear to have made less adjustment toward the emerging market economy in terms of objectives.

5.3.2 Management

In the pre-reform era, the appointment of managers needed the approval of central or local labour bureaux. An important consideration in appointments was political reliability rather than, necessarily, management ability. Although economic reforms in the 1980s gave firms more autonomy in the appointment of managers at middle level, very often appointing managers was still heavily influenced by government agencies (Child, 1996; Warner, 1995). With the deepening of economic reform in the 1990s, an interesting question is whether the appointment of managers has become more insulated from political pressures.

To address this question, managers were asked about the appointment of top and middle managers, their educational attainment, the importance of Chinese Communist Party Membership (CCPM) and personnel changes in the top management between 1994 and 1999. Middle managers are departmental managers or the equivalents. Top managers are those above the middle level of the hierarchy. For joint ventures, the questions and the answers apply only to the Chinese partner.

Table 5.4 Percentage of Top Management Appointed by Upper Bureaux by Ownership Type *

		0	>0,<10%	10-25%	25-50%	50-80%	>80%	*Total cases*
1994	JV	**4**(40)	**5**(50)			**1**(10)		*10(100)*
	SOE		**7**(41.2)	**2**(11.8)	**1**(5.9)	**2**(11.8)	**5**(29.4)	*17(100)*
	COL	**4**(33.3)	**4**(33.3)	**1**(8.3)	**1**(8.3)	**1**(8.3)	**1**(8.3)	*12(100)*
	Ltd	**7**(36.8)	**5**(26.3)	**1**(5.3)			**6**(31.6)	*19(100)*
	Ltd(o)	*7(70)*	*2(20)*				*1(10)*	*10*
	Ltd(s)		**3**(*33.3*)	**1**(*11.1*)			**5**(*55.6*)	*9*
1999	JV	**5**(50)	**4**(40)		**1**(10)			*10(100)*
	SOE	**2**(11.8)	**9**(52.9)	**1**(5.9)		**2**(11.8)	**3**(17.6)	*17(100)*
	COL	**6**(50.0)	**3**(25.0)	**2**(16.7)			**1**(8.3)	*12(100)*
	Ltd	**11**(57.9)	**4**(21.1)	**1**(5.3)	**2**(10.5)		**1**(5.3)	*19(100)*
	Ltd(o)	**9**(*90*)	**1**(*10*)					*10*
	Ltd(s)	**2**(*22.2*)	**3**(*33.3*)	**1**(*11.1*)	**2**(*22.2*)		**1**(*11.1*)	*9*

*The percentage of top managers appointed by upper bureaux related to the total number of top managers.
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.

Table 5.4 summarises the proportion of top managers appointed by upper bureaux in 1994 and in 1999. The figures outside the parentheses are the number of the firms that chose the answer and the figures in parentheses are the percentage of the total cases within each ownership type. In 1994, it seems that joint ventures had more autonomy than other ownership types over the appointment of top management. None of the SOEs could appoint their top managers without the involvement of government authorities and 29.4% had more than 80% of their top managers appointed externally. By 1999 there had been an increase in enterprise autonomy in all ownership types. In 50% or more of the joint ventures, collectives and limited liability companies no top managers were appointed by government; while only 11.8% of the traditional SOEs had broken free of the influence of upper bureaux. The data from the questionnaire show that the size of firms did not seem to be a factor in explaining autonomy. Both complete autonomy and high influence from upper bureaux were found in both larger and the smaller firms at the two points in time.

When the two sub-groups of the limited liability companies were treated separately, in 1994 those that were SOEs (Ltd(s)) had much less autonomy over managerial appointments than those that were not SOEs (Ltd(o)). In fact, in 1994 the state firms that were later corporatised seem to have been more tightly controlled by their supervisory bureaux than the traditional SOEs were. This may be due to the fact that firms chosen for the MES experiment were usually regarded as more important to the government. Five years later, of the 11 limited liability companies that had total autonomy over top management appointments, nine were firms that were not SOEs in 1994. Generally speaking, the corporatised SOEs and the traditional SOEs experienced almost the same degree of increase in autonomy. This suggests that transforming SOEs into limited liability companies does not guarantee an increase in autonomy over top management appointment. Continued state influence may be due to the continuation of large state share holdings in these firms and the continued importance of these firms to the government.

Table 5.5 The Presence of CCP Members in Top Management *

		0%	1-20%	20-50%	50-99%	100%	*Total cases*
1994	JV	**1**(10)	**2**(20)	**1**(10)	**6**(60)		*10(100)*
	SOE			**1**(5.9)	**12**(70.6)	**4**(23.5)	*17(100)*
	COL	**3**(25.0)	**2**(16.7)	**3**(25.0)	**3**(25.0)	**1**(8.3)	*12(100)*
	Ltd	**1**(5.3)	**4**(21.1)	**2**(10.5)	**6**(31.6)	**6**(31.6)	*19(100)*
	Ltd(o)	***1**(10)*	*4(40)*	*2(20)*	*3(30)*		*10*
	Ltd(s)				*3(33.3)*	*6(66.7)*	*9*
1999	JV	**2**(20)	**2**(20)	**1**(10)	**5**(50)		*10(100)*
	SOE		**1**(5.9)	**1**(5.9)	**12**(70.6)	**3**(17.6)	*17(100)*
	COL	**2**(16.7)	**2**(16.7)	**4**(33.3)	**2**(16.7)	**2**(16.7)	*12(100)*
	Ltd	**3**(15.8)	**2**(10.5)	**3**(15.8)	**11**(57.9)		*19(100)*
	Ltd(o)	*3(30)*	*2(20)*	*2(20)*	*3(30)*		*10*
	Ltd(s)			*1(11.1)*	*8(88.9)*		*9*

*The percentage of top managers who are members of the Chinese Communist Party, related to the total number of top managers

Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.

Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.

The figures in parentheses are the percentage of the total cases within each ownership type.

Turning to Communist Party membership, the SOEs had the largest presence of Communist Party members in senior management positions, both in1994 and 1999 (see Table 5.5). In 1994 none of the SOEs had top management positions completely occupied by non-Party members and in 94.1% of them more than half the number of top managers were active in the Party. In almost a quarter of the traditional SOEs all top management positions were filled by Party members. The situation had changed only slightly by 1999. In firms under other ownership forms, little difference in Party membership amongst top management was observed between the two points in time. For example, the limited liability companies that had not been SOEs always had a much lower presence of Party membership than those limited companies that were

SOEs in 1994. In 1994, in the SOEs that were later chosen for corporatisation, the membership of the Chinese Communist Party (CCP) seemed even more important than in the ones that had not been chosen. Furthermore, limited liability status had not significantly changed the presence of the Party in the senior management. The correlation between the presence of the CCP and the external appointment of top management suggests that the corporatised SOEs were even more likely to be exposed to political pressure through the top management than were the traditional state firms.

When enterprises move into a new competitive environment this may be associated with changes in senior management, to introduce 'fresh blood' more able to manage successfully in the face of new commercial pressures (Parker, 1995a, 1995b; Martin and Parker, 1997, ch. 9). Table 5.6 summarises changes in top management, excluding retirements, between 1994 and 1999. To better identify management changes in companies that had changed their ownership status in this period from those that had not, the limited companies were divided differently to the classifications used in the earlier and later tables. The following classifications were established: those companies that had been limited liability companies in 1994 (Ltd-) and those that were transformed from SOEs and collectives after 1994 (Ltd~). In general, the collectives appear to have had a relatively more stable senior management than the other ownership forms. Whilst amongst the limited companies, there were more personnel changes amongst those companies that had moved from being SOEs and collectives (Ltd~). However, only six out of the 13 firms had seen personnel changes affecting more than half of the senior management positions. Overall, it appears that top managers were clinging to their jobs despite economic change and restructuring.

Table 5.6 Changes in Top Management between 1994 and 1999 (excluding retirements) *

	0	<10%	10-25%	25-50%	50-80%	>80%	*Total cases*
JV	**1**(10)	**3**(30)		**4**(40)	**1**(10)	**1**(10)	*10(100)*
SOE	**1**(6.3)	**1**(6.3)	**4**(25.0)	**4**(25.0)	**5**(31.2)	**1**(6.3)	*16(100)*
COL	**5**(41.7)	**4**(33.3)		**2**(16.7)		**1**(8.3)	*12(100)*
Ltd	**3**(15.8)	**1**(5.3)	**6**(31.6)	**1**(5.3)	**5**(26.3)	**3**(15.8)	*19(100)*
Ltd-	*3*		*1*		*1*	*1*	*6*
Ltd~		*1*	*5*	*1*	*4*	*2*	*13*

*The percentage of the top management positions subject to personnel changes in the period from 1994 to 1999, excluding retirements.
There is a slight change in classification in this Table. Ltd- refers to limited liability companies that had been limited liability companies in 1994 and Ltd~ those that were transformed from SOEs and collectives after 1994
The figures in parentheses are the percentage of the total cases within each ownership type.

Although education level does not necessarily equate with high management ability, managers were asked about their educational qualifications. Respondents were asked to give details of both the highest and the lowest education certificates held by managers at or above the middle management level in their firm. Again, in joint ventures answers related only to Chinese managers. On the whole, the education level of SOE managers fell between that found in limited liability companies and joint ventures and that in collectives. This may imply that SOEs are now less attractive to educated people interested in a management career. The joint ventures and the limited liability companies reported relatively higher educational attainment amongst upper management and management in collectives had the lowest educational qualifications. This is probably explained by the fact that in China many collectives, and especially the township and village enterprises, were founded by people who had low educational attainment. While it may be that innate ability in entrepreneurship rather than educational achievement is more important in determining business success, it is to be seen whether the education level of management becomes a serious handicap to the further development of collective enterprises in the CEI.

A further question on management related to the appointment of middle-level posts. Table 5.7 summarises the results. Both in 1994 and in 1999, limited liability companies had the most autonomy when appointing middle managers, followed by collectives and joint ventures. The SOEs had the least autonomy; although appointing middle managers had long been officially delegated to firms. Between 1994 and 1999 all ownership types had made progress in gaining autonomy in this respect. By 1999 the limited liability companies enjoyed complete autonomy from government when making middle management appointments. Considering this finding alongside the findings for top management positions reported earlier, it seems that for SOEs that had gained limited liability status continued state shareholdings may have put restrictions on top management appointments but not on filling middle management positions.

Table 5.7 Autonomy in Making Middle Management Appointments *

		<20%	20-50%	50-80%	>80%	100%	*Total cases*
1	JV				**3**(33.3)	**6**(66.7)	*9*
9	SOE		**1**(5.9)	**4**(23.5)	**2**(11.8)	**10**(58.8)	*17*
9	COL		**1**(8.3)	**1**(8.3)		**10**(83.3)	*12*
4	Ltd				**5**(26.3)	**14**(73.7)	*19*
1	JV				**1**(11.1)	**8**(88.8)	*9*
9	SOE			**2**(11.8)	**1**(5.9)	**14**(82.3)	*17*
9	COL			**1**(8.3)		**11**(91.7)	*12*
9	Ltd					**19**(100)	*19*

*The percentage of middle managers who were appointed by firms' senior management without informing upper bureaux, related to the total number of middle managers.
The figures in parentheses are the percentage of the total cases within each ownership type.

In summary, during the five years from 1994 to 1999 there was evidence of increased autonomy over the appointment of managers in the CEI. The increase of freedom in management appointment was, however, limited in the state firms, whether transformed or traditional. Compared with the firms with foreign investments, the state firms were more subject to administrative intervention in appointing senior managers at both points in time. Significant change brought about by corporatisation was limited to appointing middle managers. Most top managers stayed at their posts after the firms were transformed into limited liability companies. Ironically, in line with the government policy of 'grasping large firms and letting go of the small ones', the state firms that were chosen for corporatisation do seem to have been under greater control by supervisory bureaux than the unincorporated SOEs, at least in terms of top management appointments. Although these firms had been transformed into companies, the top management seem to have remained an important avenue for the government to continue to exercise influence over the management of the firms.

5.3.3 Employment

Before the 1980s permanent employment or the so-called 'iron rice bowl' predominated. Local labour bureaux allocated fixed quotas of labour to firms and workers were then attached lifetime long to their *danwei*. Labour mobility was limited and firms could not dismiss their employees at will. Since the 1980s this has been changing (Lardy, 1994, p.11-12; Minami, 1994, p.208-9; and Chapter 2 above). In 1986, regulations were issued concerning the replacement of life-long employment with a labour contract scheme. The Labour Law, which was put into effect in 1995, required that all employees should be hired on labour contracts with terms depending on their previous length of service.

To examine the prevalence of the contract employment system in the CEI, firms were asked to indicate the percentage of their workforce employed on a contract basis in 1994 and 1999. Table 5.8 summarises the replies. In 1994, the year before the Labour Law came into effect, there were firms with less than 30% of the labour force working on contract in each ownership type. It is clear that there was an expansion in contract employment between 1994 and 1999 across all ownership types. Joint ventures seem to have been most advanced in the use of labour contracts by 1994 and retained their lead in 1999. This may due to the pressure from foreign partners for standardised employment practices. Another possible explanation is that the Chinese government is inclined to experiment with new reform measures in joint ventures before nationwide implementation (Warner *et al*, 1999). The collectives may be a sector where contract employment is slightly less pervasive, probably because collectives, as illustrated in the case studies in Chapter 7, usually employ significant numbers of temporary workers that can be discharged easily when not needed. The case studies reported in Chapter 8 also found that such a practice was in frequent use in some joint ventures. When comparison is made between the corporatised and the non-reformed SOEs, it seems that there was little difference between them in terms of both the pattern of change over time and the actual situations at the two points in time. This means that the increase in the use of contract employment in state firms appears more associated with the implementation of the labour law than with the MES.

Table 5.8 Contractual Labour by Ownership Type *

	1994					1999					
	<30 %	30-50 %	50-80 %	80-99 %	100 %	<30 %	30-50 %	50-80 %	80-99 %	100 %	*Total cases*
JV	1(10)	1(10)	1(10)	5(50)	2(20)			1(10)		9(90)	*10*
SOE	10(58.8)		2(11.8)	1(5.9)	4(23.5)			3(17.6)	5(29.4)	9(52.9)	*17*
COL	6(54.5)		3(27.3)	2(18.2)			1(9.1)	1(9.1)	3(27.3)	6(54.5)	*11*
Ltd	10(52.6)	1(5.3)	2(10.6)	3(15.8)	3(15.8)		1(5.3)	2(10.6)	5(26.3)	11(57.9)	*19*
Ltd(s)	*7(77.8)*			*2(22.2)*				*2(22.2)*	*2(22.2)*	*5(55.6)*	*9*
Ltd(o)	*3(30)*	*1(10)*	*2(20)*	*1(10)*	*3(30)*		*1(10)*		*3(30)*	*6(60)*	*10*

*The proportion of the workforce employed on a contract basis
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies ; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type.

Particular problems embedded in the permanent employment system were low productivity and overmanning (see Chapter 2). In spite of government concerns about rising unemployment, the mid and late 1990s saw some large-scale labour redundancies with a view to removing surplus labour. To discover the extent of change in the CEI a question was asked about labour rationalisation between 1994 and 1999. The answers, summarised in Table 5.9, suggest that the SOEs had most rationalised their workforces. Another ownership type that had undergone large-scale labour rationalisation was limited liability companies that were transformed from traditional SOEs after 1994. The results also suggest that in more than two-thirds of the joint ventures there had been labour-rationalisation activities, although apparently on a relatively smaller scale.

Table 5.9 The Rationalisation of Labour during 1994-1999 *

	0	<10%	10-30%	30-50%	50-70	>70%	Total cases
JV	3(30)	7(70)					*10(100)*
SOE		12(70.6)	2(11.8)	2(11.8)	1(5.9)		*17(100)*
COL	3(25)	7(58.3)	1(8.3)			1(8.3)#	*12(100)*
Ltd	5(26.3)	9(47.4)	2(10.6)	3(15.8)			*19(100)*
Ltd(s)	*1(11.1)*	*4(44.4)*	*2(22.2)*	*2(22.2)*			*9*
Ltd(o)	*4(40)*	*5(50)*		*1(10)*			*10*

* The percentage of the total workforce that had been laid off during 1994-1999
# The collective that had more than 70% of its workforce laid off is a firm that had stopped all of its business activities at the time the questionnaire was completed.
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type

To pursue the issue of labour rationalisation further, the firms were asked to indicate which type(s) of personnel - qualified managers, technicians, skilled workers or support staff – was(were) in either short supply or surplus supply in their organisation. When compared across ownerships, the limited liability companies that were SOEs in 1994 seem to have suffered the most from labour surpluses. They registered surpluses in three of the four areas. The next ownership type acknowledging severe surplus labour was the traditional state firm, where there was evidence of overmanning in two categories. The joint ventures and collectives reported the lowest levels of labour surpluses. On the subject of labour shortages, the main shortages reported were for qualified managers and technicians. In each ownership type, at least 60% of the firms thought that they were in need of these two types of personnel. No firm felt that it had a surplus of qualified professionals with modern management knowledge and ability. The shortage of such professionals was felt most acutely in the limited liability companies and the collectives. By contrast, all ownership types reported a surplus of support staff and other indirect employees. The most severe overmanning amongst this category of staff was recorded by the SOEs and the limited liability companies that were former SOEs.

Dismissing employees has become easier in China, although government still occasionally intervenes to slow down redundancies in fear of the social consequences. The study revealed that there had been cases of dismissal within each of the ownership types between 1994 and 1999. Four out of the nine joint ventures, seven out of the 17 SOEs, three out of the 12 collectives, six out of the nine incorporated SOEs and three of the other limited liability companies had fired employees. From the responses, it seems that the state firms, especially those that had become limited liability companies, had most heavily resorted to dismissals in the second half of the 1990s.

If we put the results of these questions regarding employment together, it can be seen that employment practices in the state firms, whether corporatised or not, seem not to have adjusted well to business needs. Although more workers in these two types of firms were employed on contract in 1999 than in 1994, this development seems to be due to the implementation of the Labour Law in 1995. The problem of overmanning still haunts the state firms, although there has been some labour redundancy in the second half of the 1990s. This is probably explained by the fact that the government fears massive social instability if unemployment rises too quickly (Benson and Zhu, 1999). Also, the philosophy that 'socialist firms are model employers' probably still exist in many state firms, even though some of them have gained the status of limited liability. In fact, the imbalance of personnel was extremely acute in this type of limited liability company. On the one hand, these companies still kept large amounts of redundant employees, and on the other they had reported severe shortages of professionals equipped with modern management skills.

5.3.4 Structure

Since the 1980s firms in China have been given more freedom to decide their own outputs and prices. More diversified distribution channels for the outputs of firms have developed and competition from foreign firms has increased. In order to compete, Chinese domestic firms have had to pay more attention to R&D and marketing activities. In the 1990s, especially after 1993, the market mechanism is expected to play a major role in co-ordinating the business activities of firms in China. More firms had to seek both suppliers of inputs and buyers of outputs (see Chapter 2). It is to be expected that this will have led to considerable restructuring within firms, with departments linked to central planning declining and marketing and possibly R&D functions increasing in importance.

Questions were asked relating to organisational structure. One asked respondents to identify and rank the three departments that they thought were the most crucial for the future development of their firms, both in 1994 and in 1999. Another question was concerned with the three departments that were consulted most frequently when senior management made strategic decisions. In 1994, across almost all the ownership types, around one third of the firms thought that the production department was the most important. The only exception was the collective sector, where marketing and R&D departments were singled out. This may be explained by the more market-oriented behaviour of collectives at that time (Li, 1996). Many collectives, especially the township and village enterprises, have faced hard budget constraints since they were established (Steifeld, 1998).

By 1999, however, none of the respondent firms claimed primacy for their production department. In each ownership type, about one half of the firms now thought that their future success relied mainly on their marketing efforts. Also, more firms had begun to appreciate the importance of R&D for survival and growth. The joint ventures as a whole did not put so much emphasis on marketing and R&D, but this is probably explained by the fact that they sell the bulk of their products on overseas markets, where marketing activities are usually organised by the foreign partners. Moreover, core R&D activities may be conducted at the headquarters of the partner firms. Joint ventures in China usually carry out peripheral work, such as adjusting the core technology and product design to meet local needs (Bennett, *et al.*, 1999)

Table 5.10 The Departments Consulted Most Frequently in Strategic Decision-Making by 1999

Department	The dept. most frequently consulted						Aggregate scores					
	JV	SOE	COL	Ltd	*Ltd(s)*	*Ltd(o)*	JV	SOE	COL	Ltd	*Ltd(s)*	*Ltd(o)*
Production	**1**(10)	**1**(5.9)					8	10	9	11	*5*	*6*
Marketing	**5**(50)	**12**(70.6)	**11**(91.7)	**11**(57.9)	*5(55.5)*	*6(60)*	21	42	35	43	*19*	*24*
R&D	**2**(20)	**4**(23.5)		**4**(21.0)	*2(22.2)*	*2(20)*	16	33	17	36	*17*	*19*
Procurement							3	2		2	*1*	*1*
Finance	**2**(20)		**1**(8.3)	**3**(5.3)	*1(11.1)*	*2(20)*	8	10	8	17	*9*	*8*
Personnel							2	1		2	2	
CEO office				**1**(15.8)	*1(11.1)*					3	3	
Total	*10*	*17*	*12*	*19*	*9*	*10*						

Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type.

Table 5.10 is concerned with the departments most frequently consulted in strategic decision-making during the five years from 1994 to 1999. In the Chinese version of the questionnaire that were sent to the sample firms, 'strategic decisions' was defined as 'important decisions that are concerned with future development direction of the firm'. The figures in the left-hand part of the table are the numbers and percentages of the firms within each ownership type that cited the particular department as the most frequently consulted. The right-hand part details the aggregate scores for each department by ownership, with three points to the first most consulted departments, two points to the second, and one point to the third. It can be seen that for all the ownership types, the marketing department is the one most involved in strategic decisions, followed by the R&D department. The Table also reveals that the finance department plays an important role. This may reflect the shortage of capital faced by many firms in China; but it may also indicate that firms now take more care of their finances.

The questionnaire also found changes in internal communications. As firms move towards operating according to market signals rather than the externally imposed plans, this can be expected to have an effect on internal communications. This can impact both in terms of the type of communications (e.g. incentives and reporting of results against targets rather than detailed orders) and the direction of flow (more lateral communication as against pure top-down reporting) (Dunsire, *et al.*, 1988, p.373). Allied to this would be a structure involving more decentralisation of decision making (Alchian and Demsetz, 1972; Parker, 1995a). More decisions, especially operational ones, may be made by lower levels in the management hierarchy. Changes of this kind should be reflected in both the content and direction of communications within firms. There may also be a change in the media used to transmit and store information (e.g. more IT investment). To fully address the potential changes mentioned above, a wide range of questions needed to be asked, but this would have led to an excessive number of questions on this subject compared to the other subjects researched through the questionnaire. Instead, therefore, the questionnaire survey only asked questions regarding the content of communications. In particular, one question asked which three kinds of information were most frequently involved in the communications initiated by top management; another question was concerned with the three kinds of information that most frequently appeared in upward information flows to senior management.

Tables 5.11 and 15.12 detail the results. Both tables are divided into two parts. The upper part gives the number of firms within each ownership form which chose a particular answer as the most important information type; the second half shows the aggregate scores based on their three choices (calculated in the same way as for Tables 5.3 and 5.10). It appears that the content of intra-firm communications is highly business-related no matter the nature of the ownership of the firm. In all of the respondent firms, the information that was most frequently involved in communications was of direct business relevance. A close look at the type of business information, however, did highlight some differences. It appears that the joint ventures were the most concerned about government policies and regulations in downward communications. Although not necessarily being the primary concern, business related information from government still seems to be an important part of internal communication for most firms in the CEI. For SOEs, collectives and limited liability companies, what the subordinates were most likely to receive from top management in terms of communication was the decisions made at the top management level. This propensity was lower in the joint venture sector.

Table 5.11 Information that Most Frequently Flows Downward from Top Management

Types of information	JV	SOE*	COL*	Ltd	*Ltd(s)*	*Ltd(o)*
The most frequently appearing information						
Non-business related government policies and regulations						
Other non-business related information						
Business related government policies and regulations	**5**(50)	**4**(25)	**3**(27.3)	**5**(26.3)	*2(22.2)*	*3(30)*
Other business related information from the government		**1**(6.3)		**1**(5.3)	*1(11.1)*	
Instructions on non-business related affairs asked for by subordinates						
Instructions on business related affairs asked for by subordinates	**2**(20)	**3**(18.9)	**2**(18.2)	**1**(5.3)		*1(10)*
Decisions made by top managers on non-business related affairs						
Decisions made by top managers on business related affairs	**3**(30)	**8**(50)	**6**(54.5)	**12**(63.2)	*6(66.7)*	*6(60)*
Aggregate scores						
Non-business related government policies and regulations						
Other non-business related information			1	2	2	
Business related government policies and regulations	20	23	15	27	13	14
Other business related information from the government	10	13	13	12	10	2
Instructions on non-business related affairs asked for by subordinates		1		1	1	
Instructions on business related affairs asked for by subordinates	12	24	14	22	7	15
Decisions made by top managers on non-business related affairs						
Decisions made by top managers on business related affairs	16	33	23	41	20	21

* One SOE and one collective did not respond to this question.
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type

In terms of upward information flows (Table 5.12), lower hierarchical levels in the joint ventures seemed most likely to ask for instructions about business related affairs. The same pattern, though to a lesser degree, could be found in the SOEs and the collectives; and to an even lesser degree in the limited liability companies. Such a heavy reliance on the upper level for instructions reflects the tendency to avoid responsibility and the so-called 'learned powerlessness' (Schermerhorn, Jr. and Nyaw, 1990) found in China. Even the joint ventures were not free from this; although in the joint ventures top managers appeared less willing to give subordinates detailed decisions (Table 5.11).

Table 5.12 Information that Most Frequently Flows from Subordinates to Top Management

Types of information	JV	SOE*	COL*	*Ltd*	*Ltd(s)*	*Ltd(o)*
The information appearing most frequently						
Asking for instructions about non-business related affairs						
Asking for instructions about business related affairs	**8**(80)	**10**(62.5)	**6**(54.5)	**6**(31.2)	*3(33.3)*	*3(30)*
Routine operational reports	**1**(10)	**4**(25)	**3**(27.3)	**8**(42.1)	*3(33.3)*	*5(50)*
Decisions made by lower level on non-business related affairs						
Decisions made by lower level on business related affairs	**1**(10)	**2**(12.5)	**2**(18.2)	**5**(26.3)	*3(33.3)*	*2(20)*
Aggregate scores						
Asking for instructions about non-business related affairs		4	2	*1*	*1*	
Asking for instructions about business related affairs	28	41	27	36	*15*	*21*
Routine operational reports	19	25	23	39	*17*	*22*
Decisions made by lower level on non-business related affairs		3	2	5	*2*	*3*
Decisions made by lower level on business related affairs	9	21	11	30	*16*	*14*

* One SOE and one collective did not respond to this question.
Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type

5.3.5 Inputs and Outputs

Sources of investment funds for firms in China have changed due to economic reform. Investment hunger in state firms (Kornai, 1992) has resulted in great amounts of money being pumped into China' SOEs and a few collectives, firstly in the form of subsidies and then in the form of soft bank loans. However, reforms are now leading the banks to becoming more commercial in the way they lend money, with more attention paid to the borrower's credit worthiness than to political pressures (Steinfeld, 1998). Some firms have also had recourse to the new stock markets in Shanghai and Shenzhen. To assess changes in capital financing, respondents were asked to rank the three main sources that they had used for investment funds during the five-year period from 1994 to 1999. Table 5.13 summarises the replies. As in Tables 5.11 and 5.12, the upper part of this table details the most important source and the other part aggregates the three main alternatives chosen.

It is clear that profit retention contributed substantially to firms' investment during the five years, especially in the case of the joint ventures, where it was the most important source of capital. Indeed, the non-state firms seem to have relied more on retained profits for investment than is the case for the state enterprises. In the traditional SOEs there was a heavy reliance on bank loans. Furthermore, these SOEs continued to rely more on state subsidies than the other ownership forms. Dividing the limited liability companies into the two sub-groups of Ltd(s) and Ltd(o), those with SOE roots (Ltd(s)) continued to be financed similarly to the traditional SOEs, with a greater dependence on bank loans and subsidies (see the aggregate scores for the traditional SOEs and corporatised SOEs for these two types of financing). Considering the lower degree of recourse to bank loans among the non-state firms, it appears that in the second half of the 1990s access to bank credits may have remained easier for state firms than for firms under other ownership forms. Among the limited liability companies, only one firm had used share issues on the stock markets as its main source of funds. In China, firms issuing public shares remain under tight control of the government. Under the currently used quota system for choosing firms for the jointstock company experiment, applications by non-state firms are likely to be rejected (interview with an official at the Economic and Trade Commission of China).

Table 5.13 Major Sources of Investment Funds during 1994 to 1999

Source of funds	**JV**	**SOE**	**COL**	*Ltd*	*Ltd(s)*	*Ltd(o)*
			The most important source			
Bank loans	**2**(20)	**11**(64.7)	**7**(58.3)	**10**(52.6)	*4(44.4)*	*6(60)*
Issuing shares				**1**(5.3)	*1(11.1)*	
Profits retention	**5**(50)	**4**(23.5)	**4**(33.3)	**5**(26.3)	*2(22.2)*	*3(30)*
Funds raised from employees				**2**(10.6)	*2(22.2)*	
Government subsidies						
Equity capital	**2**(20)			**1**(5.3)		*1(10)*
Private loans*						
Other sources	**1**(10)	**2**(11.8)	**1**(8.3)			
			Aggregate scores			
Bank loans	12	39	23	36	*17*	*19*
Issuing shares				6	*5*	*1*
Profits retention	19	26	22	30	*11*	*19*
Funds raised from employees	3	5	4	13	*7*	*6*
Government subsidies	1	8	3	4	*4*	*0*
Equity capital	3			4	*1*	*3*
Private loans*			5			
Other sources	4	11	4	7	*5*	*2*

Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentage of the total cases within each ownership type.
*Private loans refers to money borrowed from friends or relatives.

Down to the 1980s, the procurement of inputs and the distribution of outputs were bureaucratically co-ordinated. When China began its economic reforms, input and output transactions were one of the first areas that the Chinese authorities delegated to the management of firms; although the actual autonomy enjoyed was still limited (Blecher, 1989; and see Chapter 2). In the 1990s firms have been further encouraged to take responsibility for their input and output decisions through a series of further reforms and new government regulations.

A number of studies have examined the input and output transactions of Chinese firms. Nee (1992) studied the transactions of three types of firms, namely 'non-marketised', 'marketised', and private firms. The non-marketised included the state-owned firms and some collectives, and marketised firms mainly referred to township and village enterprises (collectives), whose input procurement and output channelling depended primarily upon market transactions. The private firms were most distanced from state intervention and were most reliant on market signals. Nee concluded that the mode of input and output transaction was closely associated with the ownership status of firms. Child's study of six firms in Beijing revealed that, despite nominally delegated authority, input and output decisions were still constrained by state intervention (Child, 1996, ch.7). These studies were concerned, however, with the situation in the 1980s or the early 1990s, before more recent rounds of reform. The findings therefore need updating.

Through the questionnaire two questions were asked about input procurement and one about output transactions. The answers are provided in Table 5.14. The first question about inputs (raw materials and components) asked respondents to identify the most important sources in 1994 and 1999. The upper part of the table shows that in 1994 at least two thirds of all the respondent firms within each ownership type had already used market-related sources (namely other firms and through the open market). This pattern remained almost unchanged in 1999, although over time it can be seen that the reliance of a few firms on administrative sources (local government and regulated imports) decreased. This is confirmation that firms in the CEI have moved away from bureaucratic control over input transactions.

The second question concerning inputs asked the firms to indicate the proportion bought at regulated prices. The answers are summarised in the middle part of the table. A difference between different ownership types, both in 1994 and 1999, is evident. At both points in time the limited companies that were not previously SOEs (Ltd(o)) and the joint ventures used less inputs bought at planned prices. The collectives were similar in this respect, but to a lesser extent. In the case of the SOEs and the limited companies that earlier were traditional SOEs (Ltd(s)), however, there is evidence of a slightly higher dependence on regulated prices at both points in time. The reliance on regulated inputs was most obvious among the incorporated SOEs in 1994. This seems to provide further confirmation that the state firms that were chosen for corporatisation may have been more important to the government and therefore obtained larger amounts of inputs at favourable prices. In 1999, the corporatised SOEs remained the sector most dependent on regulated inputs, although the degree of this dependence had reduced. This suggests that the increased reliance on market transactions by the incorporated SOEs may result from the relaxation of government control over prices rather than from the process of corporatisation.

Another question on transactions asked the managers to indicate the proportion of output sold at administratively regulated prices. The answers are displayed in the bottom part of the table. The patterns above are generally repeated. At both points in time, the non-state firms (joint ventures, collectives and Ltd(o)) were more dependent on the market for output channelling than were the state enterprises (SOEs and Ltd(s)). Over time, an increased degree of involvement in market transactions was observed in all of the ownership types.

Table 5.14 Input and Output Transactions

		1994						1999					
		JV	SOE	COL	Ltd	Ltd(s)	Ltd(o)	JV	SOE	COL	Ltd	Ltd(s)	Ltd(o)
Major source of inputs	Central government												
	Local government		**1**(5.9)		**1**(5.3)		**1**(10)						
	Other firms	**5**(50)	**8**(47.1)	**10**(88.3)	**12**(63.2)	**7**(77.8)	**5**(50)	**6**(60)	**8**(47.1)	**10**(88.3)	**12**(63.2)	**7**(77.8)	**5**(50)
	Regulated imports	**3**(30)	**2**(11.8)					**1**(10)	**1**(5.9)				
	Open market	**2**(20)	**6**(35.3)	**2**(16.7)	**6**(31.6)	**2**(22.2)	**4**(40)	**3**(30)	**8**(47.1)	**2**(16.7)	**7**(36.8)	**2**(22.2)	**5**(50)
Total cases		***10***	***17***	***12***	***19***	***9***	***10***	***10***	***17***	***12***	***19***	***9***	***10***
The proportion of inputs bought at regulated prices(%)	0	**7**(70)	**8**(47.1)	**7**(58.3)	**8**(42.1)	**1**(11.1)	**7**(70)	**9**(90)	**11**(64.7)	**10**(88.3)	**15**(78.9)	**6**(66.7)	**9**(90)
	<10	**1**(10)	**4**(23.5)	**3**(25)	**7**(36.8)	**5**(55.6)	**2**(20)	**1**(10)	**3**(17.6)	**2**(16.7)	**3**(15.8)	**2**(22.2)	**1**(10)
	10-30	**2**(20)	**4**(23.5)	**1**(8.3)	**1**(5.3)	**1**(11.1)			**2**(11.8)		**1**(5.3)	**1**(11.1)	
	30-50			**1**(8.3)	**2**(10.6)	**1**(11.1)	**1**(10)						
	50-80				**1**(5.3)	**1**(11.1)							
	>80		**1**(5.9)						**1**(5.9)				
Total cases		***10***	***17***	***12***	***19***	***9***	***10***	***10***	***17***	***12***	***19***	***9***	***10***
The proportion of outputs sold at regulated prices(%)	0	**8**(80)	**8**(47.1)	**7**(58.3)	**11**(57.9)	**4**(44.4)	**7**(70)	**9**(90)	**12**(70.6)	**10**(88.3)	**16**(84.2)	**6**(66.7)	**10**(100)
	<10	**1**(10)	**4**(23.5)	**3**(25)	**4**(21.1)	**3**(33.3)	**1**(10)	**1**(10)	**3**(17.6)	**2**(16.7)	**2**(10.6)	**2**(22.2)	
	10-30	**1**(10)		**1**(8.3)	**1**(5.3)		**1**(10)				**1**(5.3)	**1**(11.1)	
	30-50		**4**(23.5)	**1**(8.3)	**1**(5.3)	**1**(11.1)							
	50-80				**2**(10.6)	**1**(11.1)	**1**(10)		**1**(5.9)				
	>80		**1**(5.9)						**1**(5.9)				
Total cases		***10***	***17***	***12***	***19***	***9***	***10***	***10***	***17***	***12***	***19***	***9***	***10***

Ltd(s) refers to firms that were SOEs in 1994 but were later transformed into limited liability companies.
Ltd(o) refers to firms that either were not SOEs, e.g. collectives, which were later transformed into limited companies; or were already limited liability companies in 1994.
The figures in parentheses are the percentages of the total cases within each ownership type.

Further analysis of the data showed that there was no obvious association between the level of the government agencies to which the firms are subordinate and the proportion of inputs and outputs transacted at regulated prices. Nor was there an apparent connection between the size of firms and the degree of their market orientation for output and input transactions. But it does seem that the nature of the market for a firm's product could be a factor. For example, producers of electronics measuring appliances and special electronics equipment, two types of product that have specialised requirements for inputs and outputs, tended to rely relatively more heavily on regulated transactions. Among those firms that sold 30-50% or more of their outputs at regulated prices in 1994, two thirds of them manufactured products falling into these two product categories. For input transactions, all of the five firms buying at least 30-50% of their inputs in 1994 and two out of the four firms buying at least 10-30% of their inputs in 1999 at regulated prices were these kinds of producers. This echoes Child's conclusion that technology may influence the mode of transaction (Child, 1994, ch.7). It also suggests that, although I tried to minimise the impact of technology on management and structures by surveying just one industry, like all industries in China the CEI includes a range of technologies. I was not, therefore, entirely successful in controlling for the effect of different technologies. Because there are only two telecommunication equipment producers and no radar makers among the respondent firms, it was not possible to test whether the strategic nature of products, also identified as important by Child, played a role in the involvement of firms in market transactions.

5.4 Conclusions

Since 1993, a series of reform measures has been launched in China with the intention of building the so-called 'socialist market economy'. Expected to bring about changes in both the outside economic environment and at the enterprise level, the recent reforms were an attempt to revive the state sector, whose performance had deteriorated during the earlier period of economic reform. By studying changes in the management and organisation of firms in the CEI, this chapter has presented a preliminary assessment of the effects of the economic reform programmes launched in China after 1993. Based on the data from a questionnaire survey of firms in the CEI undertaken at the end of 1999, comparisons have been made over time and across ownership types.

Generally speaking, there seems to be signs that progress has been made by firms in introducing more business-oriented practices. Firms now seem to put a higher priority on market-oriented objectives than they did in 1994. They also enjoy greater autonomy when dismissing employees and appointing managers, especially managers at the middle level. There is greater appreciation of the importance of marketing and R&D activities, more business related intra-firm communications, more contract-based employment practices, and a greater reliance on the market for input and output transactions.

At the same time, however, there are some marked differences between firms depending on their ownership status, especially between the state firms (corporatised and traditional SOEs) and the non-state ones (joint ventures and collectives and other limited liability companies). The MES, initiated after 1993, was intended to commercialise SOEs through reform and restructuring. On the basis of the questionnaire results, the effects so far appear to be limited. On the one hand, the corporatisation of SOEs seems to have made firms more commercially oriented, especially when compared to traditional SOEs, for example in terms of their objectives. Limited liability status also seems to have given firms more autonomy in appointing middle managers. On the other hand, these state corporations appear to have little difference from the traditional SOEs when it comes to top management appointments, investment funding and input and output transactions. In these matters both corporatised and non-corporatised SOEs still seem to suffer from more government intervention than firms of other ownership types in the CEI. The two groups of state firms are also similar in their degree of overmanning. In general, although there have been changes in the desired direction, these two groups of state firms still seem to lag far behind the firms under non-state ownership in terms of market-oriented behaviour.

The MES, which was implemented on an experimental basis after 1993, is intended to transform SOEs into independent economic entities. However, this programme is now conducted in China through a quota allocation system. Firms participating in this programme are chosen by the government. Consequently, the state firms that have been corporatised in the CEI appear to be, as revealed by the questionnaire survey, larger in size than those so far not-chosen for limited liability status. Because they are large in size, they may well have been consider by government to be more important. Hence, these state firms seem, before their corporatisation, to have been subject to a greater degree of administrative intervention than the SOEs that have not yet been involved in the MES, especially in terms of top management appointments and input transactions. After corporatisation, ties with the government seem not to have been completely cut. Appointments of senior managers in these corporations, as in the traditional SOEs, are still made with a heavy involvement of supervisory authorities. This continued influence from the government over the appointment of top managers, together with a heavy presence of Party members in the top management of the incorporated SOEs, may be expected to create opportunities for continued administrative intervention and political pressure. Although financial reform has deepened in China, government subsidies continue to flow to both the traditional and the reformed SOEs. With easier access to bank credits than non-state firms, it is quite likely that the state corporations continue to obtain soft bank loans. Although the prices of most commodities in China have been freed, the use of regulated inputs and outputs has not been eliminated in both the reformed and the unreformed SOEs. In addition, corporatisation has not led to the solving of overmanning in state firms. Like the non-reformed SOEs, the state corporations still suffer from severe personnel surpluses, even though there have been large-scale labour redundancies in China in the second half of the 1990s.

Evidence from the questionnaire survey suggests that while the corporatisation of SOEs is intended to provide improved conditions for market-oriented behaviour, and has done so to some degree, so far the changes do not appear to have been sufficient to lead to greatly changed behaviour within the state sector in the CEI. This finding is consistent with studies that have called for further changes in corporate governance practices in China (Lin, 1995, 1999; Ji, 1998). Continued large state shareholdings in corporatised enterprises continue to facilitate political meddling and continue to blur property rights. The result is a lack of the effective corporate governance structures that many maintain are critical to promoting economic efficiency (Steinfeld, 1998, p.43-4; Tam, 1995) (see Chapter 3 for a fuller discussion of the role of property rights and governance structure in shaping a firm's behaviour).

The results of the survey do, of course, need to be treated with caution. Focusing on the one single industry, the CEI, it is possible that the findings presented in this chapter are not applicable to other Chinese industries. Only similar studies of other industries will clarify this. Also, the response rate was low, although perhaps not surprisingly so given the difficulties of using postal questionnaires in China. The use of a postal questionnaire had the advantage of providing responses from a larger number of firms and over a wider geographical area than could have been achieved by alternative research methods such as interviews. Given the low response rate, the findings of the questionnaire survey need to be assessed against other evidence. To this end in-depth case studies were undertaken in 17 selected firms in the CEI based on interviews and enterprise data. The results are reported in the following four chapters. Chapter 5 looks at three traditional SOEs; Chapter 6 discusses the answers from the interviews with the managers of five collectives; Chapter 7 studies four joint ventures; and Chapter 8 examines five corporatised SOEs.

6. Introduction to the Case Studies and Case Studies I: Traditional SOEs

In the 1990s enterprise reform in China shifted from enlarging management autonomy to clarifying property rights over firms' assets. Meanwhile complementary reforms occurred in other areas of the economy. In particular, the standardisation of employment contracts, the introduction of social security programmes and the commercialisation of state banks were carried out, with the intention of creating conditions for SOEs to operate more like commercial entities. The history of the economic development of China and the process of economic reform since 1979 were reviewed and commented upon in Chapter 2. Chapter 3 provided a theoretical framework for analysing Chinese enterprise reforms, which recognised the interaction between firms' behaviour and the external institutional environment. In Chapter 5, data from a questionnaire survey were analysed to provide a broad picture of the behaviour of firms in the Chinese Electronics Industry (CEI) in the new reform era.

The questionnaire survey suggested that the behaviour of firms in the CEI varied across ownership forms. In general, non-state firms were more market-oriented than both the corporatised and the non-corporatised SOEs. The Modern Enterprise System (MES) seems to have only brought about limited change in the behaviour of firms, however. In order to obtain a deeper understanding of what happened in firms in the CEI as economic reform in China deepened in the 1990s, and given the limitations of the questionnaire survey, especially the low response rate, 17 firms were chosen for in-depth case study analysis.

6.1 Introduction to the Case Studies

One variable was controlled for when choosing the sample firms for interview. That variable is the type of the firm's main product. Considering that in China firms producing different types of product face different product and factor markets, may suffer different degrees of administrative intervention and may receive different degrees of development priority from government, the firms for the case study analysis were chosen from a single sub-industry in the CEI, i.e. the consumer electronics industry. One of the reasons for choosing this sub-industry was that it included the variety of ownership types required by the research. Furthermore, the consumer electronics industry in China has experienced dramatic market changes, from a sellers' market in the 1980s and the early 1990s to a buyers' market afterwards (see Chapter 4 for a discussion of the changes in market conditions for consumer electronics products). By choosing the sample firms from this sub-industry, it was expected that they would reveal differences in response of the firms towards increased market competition, perhaps reflecting the results of different ownership forms. For example, it might be expected that joint ventures, collectives and corporatised SOEs would be more responsive to market changes than the traditional SOEs.

In the light of the vast size of China, sample firms were chosen mainly from just two geographic areas, namely North China around the cities of Beijing and Tianjin and the South-east of China in Shanghai city and Jiangsu province. Initially, 21 firms in these two regions were approached to take part in the research and 15 agreed and were interviewed. To increase the number of firms involved, one firm in Qingdao, Shangdong and one in Guangdong were also included afterwards and approached through personal connection. Hence, a total of 17 firms were finally included in this part of the research (see Table 6.1). These 17 firms also had either responded to the questionnaire discussed in the previous chapter or were asked to complete the questionnaire on my visit. But one of the corporatised SOEs - Beijing Peony Electronics Group Co. Ltd - did not return the questionnaire because the president I interviewed stepped down soon after my visit.

During March and May 2000, visits were made to these 17 firms. Semi-structured interviews with senior managers of the firms were used to collect data. Although in each of the firms I had asked to interview other managers, senior managers of most of the firms rejected this request. Eventually, only in three of the 17 firms was permission given for more than one manager to be interviewed. Although the general manager of the township firm in Jiangsu refused my request to interview other managers, I had been showed around the firm and talked to other employees before the interview with the general manager. It proved that the information provided by different informants in a single firm was broadly consistent. Complementary to the interviews, data in other forms on the sample firms, such as internal documents, meeting memos, and articles and reports in newspapers and magazines, were collected, where available. Except where specified in the text below, the information cited came from the interviews.

Table 6.1 Details of the Interviewed Firms

Firm	Ownership	Location	Informant
Beijing TV Equipment Factory	Traditional SOE	Beijing	Mr Liu, Vice Factory Director
A firm making audio products in Beijing	Traditional SOE	Beijing	Mr Zhao, Director of the President Office
Beijing Feida Electronics Company	Traditional SOE	Beijing	Mr Chen, Vice General Manger
JVC Beijing Electronics Industries Co. Ltd	Joint venture	Beijing	Mr Chen, Vice President
Shanghai Kenwood Electronics Co., Ltd	Joint venture	Shanghai	Mr Wang, Assistant General Manager, Mr Zhao, Manager of the Personnel Dept.
Tianjin Great Wall (group) Electronics Co.	Joint venture	Tianjin	Mr Li, Chairman of the CEO Office
Tianjin Samsung Electronics Co., Ltd	Joint venture	Tianjin	Mr Chen, Vice President, Mr Tian, Vice Manager of the Personnel section
Beijing Peony Electronics Group Co. Ltd	Corporatised SOE	Beijing	Mr Fan, President
Nanjing Audio Equipment Co., Ltd.	Corporatised SOE	Jiangsu	Mr Wu, Vice General Manager
Panda Electronics Group co., Ltd	Corporatised SOE	Jiangsu	Mr Shen, Manager of the Planning Dept. Mr Ye, Vice General Manager
Qingdao Hisense Group Co., Ltd	Corporatised SOE	shangdong	Mr Cheng, Vice General Manager
Shanghai Jinxing Television Ltd	Corporatised SOE	Shanghai	Mr Zhou, Vice General Manager
Beijing Yadu Science and Technology, Ltd	Corporatised collective	Beijing	Mr Wen, Director, Vice General Manager
Beijing Jinghai Group Co.	Collective	Beijing	Mr Wang, President
A firm producing Audio products in Guangzhou	Collective	Guangdong	Mr Liu, Vice President
A township firm producing audio & video products	Collective	Jiangsu	Mr Qin, General Manager
Nanjing Hongqi Radio Factory	Collective	Jiangsu	Mr Yang, Factory Director

According to the theoretical framework detailed in Chapter 3, the behaviour of firms is shaped by their institutional environment. Management run their businesses in reaction to constraints and incentives presented by their enterprise governance and the structure of property rights. The central question of the research is whether the

Chinese SOEs have, as expected by the designers of economic reform, become independent business entities operating according to market signals. The case studies were intended to address this research question by studying what changes occurred in the institutional environment under which the firms operated, as a result of the economic reforms in the 1990s, and how the firms' behavour changed in response to the external changes. Based on the analytical framework, the case studies first addressed the external relations of firms to explore their institutional environment. They then focused on management and organisational issues within the firms, in an attempt to examine the impact of the economic reforms of the 1990s on management practices.

The study of the external relations of firms, namely relations with superior government authorities, with banks and with the market, provides a general understanding of the main features of the institutional arrangements under which the firms operate. The nature of these relations determines which kind of co-ordination mechanism, bureaucratic or market, is primarily used to determine the economic activities of firms. As expected under the new round of economic reform, Chinese SOEs should now make business decisions based on the rules of the market rather than on the plans of government departments. Also, with the commercialisation of the state banks, the budget constraints of state firms should be much harder.

Changes in the institutional environment should result in adaptations in behaviour at the enterprise level. We might expect that the organisational structure of firms will be streamlined, especially in the non-business related units. Meanwhile, it is expected that there will be a shift of emphasis and support to functions that are crucial for success in the market, such as marketing and product development. Generally, these organisational changes are intended to strip from firms their functions as communities and platforms for political inculcation and leave them as business concerns only.

Changes may also be expected in the appointment and remuneration of managers (Parker, 1995a). If the market mechanism is used to appoint managers, the most important concern should be the ability of the candidates (and therefore their marginal revenue product). In order for managers, who are agents of the owners of a state firm, to behave for the well being of the firm, their performance must be evaluated objectively and accurately and they should be remunerated accordingly (Abowd, 1990). When firms in China move towards being commercial entities, it is to be expected that employment practices that best serve their business needs will be adopted.

The questions used in the interviews are reproduced in the Appendix 6.1. They covered the following topics: the general information about the firms, the relations with government agencies, organisational structure, management appointment and remuneration, employment practices, investment projects and product development.

For the purpose of the research, the 17 firms in the case study analysis were divided into four groups according to their ownership form, namely traditional SOEs, collectives, joint ventures, and corporatised SOEs. These four groups of firms are addressed in this chapter and the following three chapters. The non-state firms – the collectives and the joint ventures - serve as reference point to which the state firms are compared. In the rest of this chapter the three traditional SOEs studied in depth are discussed. After an overview of the history of the firms, the firms' external relations are examined. Next, issues related to organisational structure, management and labour are considered. Finally, conclusions are drawn based on the case studies.

6.2 Overview of the Three Traditional SOEs

The first group of firms for the in-depth case studies consists of three traditional SOEs, all located in Beijing. They are Beijing TV Equipment Factory (BJTE); Beijing Feida Group Company (BF); and a firm producing audio products, which wished to remain anonymous and is called BA in the text. These three enterprises are categorised as traditional SOEs because they have not been corporatised according to the principles of the MES, and because they still use the Contract Management Responsibility System (CMRS).[4] Background information on the firms is given in Table 6.2.

[4] At the time when the interviews were conducted corporatisation had begun but was not completed in BA.

Table 6.2 Background Information on the Three Traditional SOEs

Firm	Main products	Firm size*	Number of employees
BJTE	Broadcasting equipment (1971onwards) Video cassette recorders (1985-1995) Video cameras (1992-1995) Specific TV equipment (1999 onwards)	Large (before 1994) Medium (afterwards)	Over 2000 in 1986; Over 500 in 1999.
BA	Radios (before 1984) Cassette recorders (1984-1996) Visual compact disc players (1996-1998) Real estate services (1998 onwards)	Large (before 1995) Medium (afterwards)	1700-1800 in 1979; Over 3000 in 1985; About 600 in 1999.
BF	Movie projectors (before 1985) Cassette recorders (1985-1996) Magnetic heads (1985 onwards) Real estate services (1998 onwards)	Medium	Over 800 in 1980; Over 2000 in 1993; About 1000 in 1999.

* According to the latest Chinese official criteria, the boundary between large-sized firms and medium-sized firms is 500 million Yuan in both capital and annual sales revenues, and the boundary between medium-sized enterprises and small ones is 50 million Yuan.

All the three enterprises have a history dating back to the pre-reform era. Supported mainly by government appropriations, in the 1980s these firms imported production equipment for consumer electronics products, which then became their main source of revenues. They enjoyed high profits when the condition in the market favoured their products and suffered greatly when the market turned into a buyer's market.

6.2.1 Beijing TV Equipment Factory (BJTE)

BJTE was established in 1971 by merging the State 761 Factory with Beijing *Beifu* Factory. As a state-owned firm, it received production quotas from its superior authority, the Electronic Instrument and Meter Bureau of Beijing (Beijing Electronics Bureau in the following text), and produced broadcasting equipment for state-owned TV stations. In the 1980s, when the market prospects for consumer electronic products in China were very rosy, a project for the firm to introduce production equipment for video cassette recorders (VCRs) was registered in the investment programmes of the Beijing Electronics Bureau. As part of the government's plan, US$ 60 million was allocated in 1985 to BJTE to import a VCR assembly line from Panasonic in Japan (*The Yearbook of the Chinese Electronics Industry*, 1986, p. I-16). Becoming one of the six state-designated producers of VCRs at that time, the firm entered its most prosperous period, with the number of employees amounting to a peak of over 2000. In 1992, in co-operation with Panasonic, BJTE started producing video cameras, a project that proved to be unsuccessful, however, because the market demand turned out to be less than expected. Almost at the same time, the government began to control the number of firms producing VCRs, in order to reduce and even eliminate duplicate assembly lines. Officially, only four main production bases for VCRs were left in China, each with a different designated partner in Japan. After great efforts, BJTE managed to get permission from the government to continue its VCR production. In 1995 the production of VCRs in BJTE was transferred to a joint venture with a Japanese partner, JVC (this joint venture is labelled BJJVC and studied in Chapter 8). After the existing VCR production equipment and related technicians moved to the joint venture, production of VCRs stopped in BJTE, although sales continued for a time because large stocks of previously made products existed following the shrinking of the Chinese domestic VCR market. In 1998, for example, the firm still recorded a sale of 11,820 VCRs (*The Yearbook of the Chinese Electronics Industry*, 1999, p.145). At the time when my fieldwork was conducted, the firm produced two main types of products: broadcasting equipment, which had been produced since the 1970s, and specific TV equipment, which was added to the firm's product portfolio in 1999.

Alongside the fate of the VCR production in BJET, a significant change occurred in the firm's size. In the 1980s and the early 1990s, the golden time for the firm, it was categorised as a large-sized enterprise in China. With over 500 employees and annual sales revenues of around 100 million Yuan in 1999, however, it fell into the class of medium-sized firms. In the early 1990s the firm began to suffer losses. Even so, investment projects for technology transformation were still approved by the higher authorities. Consequently, large amounts of un-repaid bank loans were accumulated, resulting in a ratio of liabilities-to-assets of 90% by the end of 1999.

6.2.2 Beijing Audio Factory (BA)

The history of BA can be traced back to the 1950s. Established by merging a few small private businesses, the firm started by producing radios. With praise from some high-ranked government officials, the radios produced by the firm were very popular in China and were often given as gifts to heads of other states when they visited. As one of the firms that received close attention from central government leaders, BA got easy access to government subsidies and developed quickly. The number of employees increased from several hundred to between 1700 and 1800 by the end of the 1970s.

If the pre-reform period was 'an era of glory' for BA, as so-called by its employees, the 1980s was a period of fast-growth. In the early 1980s, people in China were fascinated by cassette recorders (CRs), leading to a high demand and therefore inducing a lot of firms into the industry. With government subsidies, BA introduced production lines from Japan in 1982 and became one of the 69 CR producers listed in the state's plan (*The Yearbook of the Chinese Electronics Industry*, 1986, p. IV-74). In the face of a vast market demand for CRs in China, the firm expanded production further. In 1984, BA imported more equipment, this time from the Dutch company Philips (ibid.). Following this expansion in production, the number of employees soon exceeded 2500. In 1985, the number of employees reached a maximum of over 3000, after the acquisition of several community-owned collectives on the order of the local government. Because of good market conditions for consumer electronic products in the 1980s, the firm added electronic pianos and speaker systems to its product portfolio, though only on a small scale.

The situation, however, began to worsen in the 1990s. When the market demand for consumer electronic products in general, and CRs in particular, plummeted, BA found itself in difficulty. Trying to find new products that could bring back growth, in 1996 the firm began to produce visual compact disc (VCD) players, a product that was in great demand in China at that time. This product, however, did not bring prosperity back to BA because the market for the product, though large, was fiercely competitive. Hundreds of firms had been attracted into this industry in the second half of the 1990s. BA's products did not have enough features to differentiate them from those of other firms. When the market for VCD players became more difficult in later 1997, owing to the entry of large numbers of firms into the industry, BA had to reduce its production dramatically. In 1998, the production of VCDs was stopped and production equipment was set aside. Once again the firm had lost its main product. What the firm subsisted on afterwards was the business of real estate, which was developed after 1998. With a location in the west part of Beijing city centre, after getting approval from the superior government authority, the firm co-operated with a real estate developer to build blocks of commercial buildings on the land where BA was located. Not only was there no requirement in the co-operation agreement for BA to make a contribution to the cost of construction, the partner developer also paid the firm 200 million Yuan and gave it two blocks of buildings for the use of its land. Real estate and property management now became the most important businesses of BA and contributed to most of its revenues. Production, which was relocated to the outskirts of the city, was limited to electronics machinery and maritime satellite communication equipment, the production lines that were developed mainly in the late 1990s with support from government.

In parallel with the business downturn in the 1990s, the number of employees fell sharply. Following labour rationalisation in the middle and late 1990s, the firm had about 600 employees and supported 1000 retired workers at the time of the interview. With a turnover of around 300 million Yuan, BA was by then categorised as a medium-sized firm.

6.2.3 Beijing Feida Group Company (BF)

BF Group was established in 1993, but the history of its predecessor, the Beijing Movie Projecting Device Factory (BMPD), began from the 1950s. BMPD was a state-owned firm making movie projectors and related spares at prices less than costs, running deliberate losses that would be later made up by the government. In 1980 the firm began producing cassette recorders (CRs) and was renamed the Beijing Recorder Factory. In the beginning, the production volume was small. In 1985, after a government-sponsored project to introduce production equipment from Japan, the firm started producing CRs and magnetic recording heads on a large scale (*The Yearbook of the Chinese Electronics Industry*, 1986, p.IV-79). Profits reached an all-time high in 1986 of over 6 million Yuan; but began to fall afterwards.

In 1993 the Beijing Recorder Factory was transformed into BF Group Company, after merging with another state-owned firm. Although it was called a 'group company', in reality it was still a traditional SOE. There was no board of directors within the firm and the director continued to report to the superior government authority under the Contract Management Responsibility System (CMRS) (for a discussion of the CMRS, see Chapter 2). To some extent, the merger enhanced the firm's capability to produce magnetic recording heads. The firm therefore could still subsist, even with more than 2000 employees.

This situation, however, did not last for long. In 1995 BF was ordered by the local government to acquire another six state-owned and collective-owned factories, each with large amounts of unpaid bank loans and more than 1000 employees. Most of the acquired firms were in a bad business condition and unable to pay wages to their employees. In order for these factories to subsist, BF had to spend one million Yuan each year, the major part of which was used to fund the salary roll. Such a burden threatened not only the development of BF but also its survival. Efforts were made jointly by the government and BF' management to help the firm out, such as transferring part of the workforce and equipment to joint ventures and co-operatives, encouraging redundant employees to find their own employment and persuading some employees to retire before the officially designated age. These efforts, along with a labour-rationalisation campaign in the second half of the 1990s, reduced the workforce to about 1000 employees. However, the most important initiative to dig the firm out of its financial difficulties was the same practice as that used in BA, i.e. developing real estate. The group company and the later merged factories were all located in areas of good commercial value. In co-operation with a professional real estate developer, BF built both commercial and civilian buildings on the land, thereby raising money to keep the rest of the firm in business. Nevertheless, at the time of the interview, BF had a liabilities-to-assets ratio of 85% and was still in loss.

6.2.4 Sub-summary

From the brief reviews of the history of the three SOEs, it can be seen that each had a similar development path. Firstly, they all entered the production of consumer electronics when the market demand for these products was high. When the market conditions turned hostile later, the firms fell into financial difficulty. Secondly, major investment projects, especially those associated with production expansion, were financially supported by the government. Relatively, BA received the most extensive support from government agencies and BF the least, although in all the cases direct financial help was less frequent in the 1990s. Thirdly, government authorities played an important role in the decisions to acquire and merge with other firms. None of these decisions seem to have been driven by business concerns. In addition, with approval and encouragement from government authorities, BA and BF developed real estate to sustain the firms.

The similarity found in the development paths, as well as in the management and organisational practices of the firms, which will be addressed more fully later in the text, was not accidental. In the pre-reform era and the early phase of economic reform, they operated under the same bureaucratic industrial management system. The next section examines the nature of the institutional arrangements under which the firms operated in the reform era, by studying the firms' relations with superior authorities, banks, and the market. Based on such an examination, issues to do with organisational structure, management and labour are addressed in the remainder of the chapter.

6.3 External Relations

6.3.1 Relations with Government Authorities

The supervisory authority of the three SOEs was the Electronics Industry Office of Beijing (EIOB), the former Beijing Electronics Bureau, which in 2000 was renamed Beijing Electronics and Information Industry Holding Corporation. As the superior authority, the EIOB appointed the firms' top managers, determined the total sum to be paid in salaries and set the main business targets. It also supervised the maintaining of state-owned assets. Although according to the CMRS it should not have intervened in the operation of the firms, approval from it had to be secured before management made important decisions, such as investing in new projects, producing new lines of products, co-operating with other firms, moving location and transferring to other business lines. Indeed, the development of real estate and moving production to the outskirts of Beijing, undertaken by BA and BF, were conducted under the approval and encouragement of the EIOB and the Beijing municipal government. It is not surprising, therefore, that the three firms either mentioned that superior authorities had a significant influence on setting management objectives and making strategic decisions, or regarded fulfilling tasks assigned by higher authority as one of the most important objectives of management.

The most obvious link between the three SOEs and the EIOB was the management contracts under the CMRS, which was implemented in the firms in the late 1980s. The contract set targets for profits, sales revenue, investment in technology and, more recently, labour rationalisation and maintaining the value of state-owned assets. Before the targets were laid down in the contracts, especially those for profits and sales revenues, the directors would usually bargaining with the EIOB about their level. The aim of management was to be able to meet the targets with ease.

Through the EIOB the firms could get easy access to investment funds. During the pre-reform era, they absorbed large amounts of subsidies either for expansion or for making up losses. Appropriations continued to be pumped into the firms in the 1980s. BA spent about US$20 million introducing CR assembly lines in 1982; BJTE spent US$60 million introducing VCR assembly lines from Japan in 1985; in the same year BF introduced CR production equipment from Japan, at a cost of US$4 million. The capital for these projects came mainly from government appropriations. In the later 1980s, the subsidies were transformed into bank loans following a change in government policy. This change, however, did not block the firms' access to investment funds. As one of the interviewed managers said, 'the firm is owned by the state and so are the banks.' The common practice was that once an investment project was registered in the investment-programme list of the government, whether the industry ministry, the central government or local bureaux, loans would then be issued by the banks. In 1992, for example, BJTE had its project to introduce video-camera production equipment from Japan registered and afterwards obtained bank loans of US$15 million.

After 1993 the Chinese government put the reform of the banking system higher up the reform agenda (see Chapter 2). All the commercial banks would now be required to account for their own credits and debts and be responsible for loans issued. As a result, SOEs, especially those that were small in size, poor in financial condition and with minor strategic importance, found obtaining bank credits less easier, although not totally impossible. For instance, BA, a firm already trapped in financial difficulty in the 1990s, still found a way to get bank loans for its VCD player production in 1996.

In the second half of the 1990s, in another attempt to revive the SOEs, the central government launched a new nation-wide scheme. It asked banks to issue loans to 'designated firms', all of which were firms under public ownership, the majority of them SOEs. These loans had three features: (1) they must be used by the firms for technology transformation; (2) the firms were only asked to repay the principal; and (3) the interest incurred would be paid to the banks by the state. After lobbying efforts by its senior managers, BJTE was placed among the designated firms and received bank loans of 4 million Yuan to update its equipment. Indeed, as bank loans became less easier to get, the best way to obtain bank credits was to have the firm named in various programmes organised by the government. This was exactly what happened in the interviewed firms. As one of the managers remarked, half of his working time was spent looking for and securing such opportunities.

The relationship between the SOEs studied and their higher authorities, however, had another side, which the firms usually felt unhappy about. The firms had to follow orders from their superiors, which were sometimes destructive of business. BA's acquisition of several community collectives in the 1980s and BF's mergers with six poorly performing firms in the 1990s were all conducted on orders from the higher government agency. The reason for these orders seemed not business related. As the manager of BF said, "It is a Chinese characteristic that social stability is the concern above all others, and there is no choice for us but to accept it. When we are doing this, we keep consoling ourselves by telling ourselves that we do this to relieve and solve the difficulties of the superior authority."

6.3.2 Relations with State Banks

Before the early 1990s links between the SOEs studied and banks were usually achieved through superior government agencies. There was no need for the firms to negotiate directly with banks for loans, because higher authorities would order banks to issues loans after they had approved investment projects suggested by the firms. Such a passive role played by the banks seems not to have changed much even under the reform of the banking system launched in the mid and late 1990s. When there are schemes initiated by the government, the banks still have to pump money into SOEs no matter their financial condition. It is not strange, therefore, that contacts between the three sample SOEs and the banks were concerned more with repayment of loans than with applying for and issuing loans.

Even when repayment of loans is concerned, the interviews suggested that the banks were still in a passive position. When the government used bank loans in place of appropriations as the main means of funding SOEs, in the late 1980s, firms were required to repay these loans to the banks. BJTE, BA and BF all faced such a situation in the 1990s. Most of the bank loans taken by the firms studied had not been repaid. When the loans were due, the firms told the banks that they were unable to repay the principal. The banks had no alternative but to extend the deadline. Usually, the deadline would be extended again when it arrived. At the same time, negotiations between banks and the firms were by no means necessarily smooth. For example, the manager in BA said that quite a lot of time and energy of the firm's top managers and other relevant staff were spent negotiating with banks on debt repayments. Failing to repay previous loans, however, seems not to have blocked the firms' way to getting new credits. For example, BA succeeded in obtaining loans for VCD production in 1996 and BTE got interest-free bank loans to upgrade its equipment. The helplessness of the banks in these matters lay in a lack of authority and effective means for them to refuse loan rescheduling and demands for new loans. The remark of one of the interviewed managers confirms the nature of the continuing relations between the SOEs, state banks and the state: "Most of the bank loans are issued on order of the state; so the banks are not really worried too much about the bad debts thus incurred because they know the state will have to find ways to help them and the SOEs out."

6.3.3 Relations with the Market

Relations between the firms and the market are demonstrated by the changes in their product portfolios. The firms entered the production of CRs, VCRs or VCDs because at that time there was a huge market demand for them. But all of the three firms seems to have failed to pay attention to the quick increase in market supply that was occurring due to the entry of large numbers of other producers. Their little knowledge about the market left them vulnerable to changes in demand. When the market for their products became saturated, they decreased or even stopped production and searched for other "hot" products, repeating the same story again and again. Never in their history have the three firms produced a product as a pioneer in the Chinese domestic market. Nor did they bother to make innovations in features of their products, so as to differentiate their offering to the market. This unimaginative management strategy was encouraged by the government, which served as a buffer between the firms and the market and continued to put money into the firms directly or through soft bank loans.

6.3.4 Summary of the Institutional Environment

The interviews with the senior managers of the three SOEs confirmed that, although economic reform has deepened in China, there does not appear to have been a fundamental change in the institutional arrangements under which the traditional SOEs operate. The firms studied were still subject to essentially the same industrial management system as in the 1980s (this industrial management system for SOEs was discussed in Chapter 2), even though the various government agencies have been streamlined. More nominal autonomy has been granted to the firms studied by the 1992 Regulations, but government intervention has not stopped: important decisions in the firms are still made with the involvement of superior authorities. In spite of the fact that banks may now be more cautious when issuing new credits, the firms interviewed still were able to obtain soft loans. Also, even if they were to fail in the marketplace, the government would almost certainly bail them out. In short, although more market elements had been introduced in the 1990s, it was still the bureaucratic mechanism that co-ordinated the major activities of the three traditional state firms interviewed. Under such institutional arrangements, it is to be expected that management and organisational practices within the firms will tend to be bureaucratically directed as well. This is the subject of the next sub-sections.

6.4 Internal Structure

6.4.1 The Streamlining of Social Welfare Functions

Serving as communities for employees and their families, the state firms interviewed bore a heavy burden of social welfare before the mid 1990s. However, changes happened after the reform of the social security system in China, in the second half of the 1990s. According to relevant government regulations, firms should stop building and allocating housing to employees and establish a pool of housing funds to which both the employer and the employee should make a contribution. Free medical services are to be replaced by medical insurance and pension insurance is to take the place of firms issuing pensions. To contribute to these funds or insurance, the firms are required to set aside as salary supplements some amount of money, accounting for a certain percentage of the employees' total salaries.

At the time of the interviews, social security reform had already resulted in a shake-up in part of the social welfare facilities. For example, all of the three firms had had their own health centres and these were removed in the late 1990s. BA had a kindergarten before 1995 and BF had two, all of which were later removed. BF even had a technical school, most of whose students were the employees' children, who would be arranged a post within the firm after graduation. This school was closed in 1998.

However, the exact procedures and related supporting infrastructures for the new arrangements under the social security reform were still far from maturity at the time of the interviews and there were discrepancies in implementation. BJTE and BA, for example, still built employee apartments after 1995, though small in number. Since a standardised form of medical insurance had yet to be worked out, most of the medical expenses were still covered by the firms. For instance, BF still paid 90% of the expenses for medical services for the retired and 70% for current employees. BA paid a base level of medical expense to every employee and reimbursed 80% of the amount exceeding this base.

6.4.2 Changes in Functional Departments

One of the common changes in internal structure of the three firms in the late 1990s was the proliferation of affiliates and subsidiaries. Many departments were transformed into affiliates according to product type. In the face of a decline in the previous main businesses, the firms established joint ventures and co-operatives so as to transfer redundant equipment and employees. Consequently, by 1999 BA had about 30 affiliates or subsidiaries (about a half of them were service related) and BJTE and BF each had more than ten, most of which nominally took responsibility for their own well-being.

Changes also took place in the functional departments of the firms. Those units with overlapping functions were streamlined or removed. In BA, for example, the number of departments was reduced from ten to six by 1999. BJTE abolished its product development centre in 1995 and the planning and management office in 1998. The number of departments in BF did not change much, but some units in acquired firms were either closed down or merged with their counterparts in BF.

Not only did the functional structures become slimmer, but the number of employees in the remaining units was also cut back. In order to deal with the labour redundancy caused by the restructuring, all of the three firms employed similar practices. They asked those relatively elderly workers to retire before the official retirement age, transferred younger workers to other posts within the firms or in the affiliates and let the rest *Xiagang* (meaning laid-off but entitled to unemployment relief for two years). Although there were some who found new jobs in other firms, about a half of the redundant employees in the firms studied were eventually transferred internally to other posts.

Not all of the changes in functional departments reflected business concerns, however. In 1998, for example, BF set up a marketing department at the headquarters of the group company, not so as to reinforce its marketing ability, but to find a place for a director of one of the acquired firms. Without commitment to the group in general and the department in particular, he left one year later; the marketing department was soon abandoned.

Although in the interviews all of the three firms confirmed the importance of marketing and R&D, little seems to have been done to improve their ability in these areas. The establishment of marketing in the firms usually focused on how to get the existing products sold rather than developing an understanding of consumer needs and preferences. Their ability in product development was poor too. BJTE once had a product development centre, the only centre for VCRs among industrial firms in Beijing, which was set up by the Beijing Municipal Science Commission and partly sponsored by the Electronics Industry Ministry. It was closed in 1995 when the production of VCRs decreased dramatically.

Regarding the Party organs in the firms, the structure of the Party departments, usually consisting of the organisation department, the publicity department, the discipline committee, the Party committee office and the Youth League committee, remained, although the number of full-time Party cadres reduced. After 1994 only one such department had been merged with another Party department in BF and BJTE, and there had been no change at all in BF. All of the three firms still had a full-time Party secretary, whose salary was set equivalent to that of the firm's director. In addition, BJTE and BA had seven other full-time employees in the Party departments and BF had six, all of whom received salaries as high as those of a middle manager in their firms. In each of the firms, the Party secretary and the vice Party secretary, if the post was a full-time one, still sat on the firm's executive committee. This suggests that Party influence in SOEs continued in the firms studied.

6.5 Management

6.5.1 Appointment of Top Managers

The interviews also confirmed that the top managers of the three SOEs were still appointed by the superior government authority. In each of the firms, the CEO, whether called general manager or factory director, was appointed by the EIOB. So was the Party secretary. Generally speaking, the three firms could nominate candidates for vice director positions, but it was the superior authority that gave approval and made the appointments. Personnel changes at the top managerial level were rare in the interviewed firms. For example, there were only two cases of personnel change in the post of factory director after 1994: BJTE and BA changed their director in 1997 and 1999 respectively. These changes were, however, not due to the incumbents' failure to boost the firms' performance, but because the director in BA was promoted to a new, higher post at the Beijing Municipal Economic Commission and the manager in BJTE was transferred to another SOE as director. In addition, the transfer of top managers between SOEs also happened at vice-director level. In 1997, for example, under the arrangement of the higher authority, one of the vice-general managers in BA took up a post at the same level in another SOE.

The manager labour market is not mature in China and was still not used for top managerial posts in the traditional SOEs interviewed. If there were job vacancies at senior managerial level, it seems that the first choices were made from the 'cadre bank' of the higher authority. As a result, the top posts in the firms studied were usually filled by managers who were career state bureaucrats. Such an approach to top management appointments was most likely to hinder the involvement of people from China's infant professional manager market. In 1999, for example, as a response to the government's call for SOEs to introduce more highly educated people, BA recruited a vice-director from the professional market to prepare for corporatisation. Less than half a year later, he left the firm because his working style was unacceptable to the existing management.

Moreover, residence rights still place restrictions on recruiting top managers. China once had a very strict control on residence rights and it was impossible for those who had no residence right in a place to be employed as formal workers by local firms. The restriction was relaxed in the 1990s, in the face of an increased flow of people to the developing areas and the establishment of a more fluid labour market across China. However, in the three firms studied it was still very rare to have candidates for top managerial posts who had no residence right in Beijing. In the job advertisements used by BA and BF for the posts of vice-director, it was specified that applicants must be Beijing citizens.

In each of the three firms there was a top management body to make important decisions, called the 'factory affairs committee' or the 'executive committee'. Besides the director and one or two vice-directors, the members of the committee usually included the chief accountant, the chief engineer, the Party secretary, the secretary of the discipline committee, the chairman of the trade union and, in the case of BJTE, the vice Party secretary. This committee tended to become a further and important platform for the Party cadres to impose influence on business decisions. For example, in all of the three firms the appointment of middle managers, which were usually within the discretion of the committee, could not be made without the endorsement of the Party secretary.

6.5.2 Appointment of Middle Managers

Middle managers could be appointed by the firms themselves. The most important criteria used by the three firms studied to choose middle managers were firstly the candidates' relationship with the employees and, secondly, their ability relevant to the posts on offer. Personnel changes at this level did not happen very often after 1994. When they occurred, most of them were caused by the restructuring of the functional departments. With the streamlining of the departments, the majority of redundant middle managers were transferred to other posts at a similar level, most of them in affiliates and subsidiaries. Since there were more middle managers than really needed, job openings for outsiders were very rare. Even when vacancies did arise at the middle-management level, the firms interviewed preferred internal promotion to public recruitment.

As a result of rare personnel changes and a preference for internal promotion, little 'new blood' had been brought into the management of the three firms during the 1990s. To make things worse, little effort seems to have been made to retrain the existing management for the changing economic environment.

6.5.3 Managerial Training

Managerial training is important to gear the mental attitudes of top managers to the changing economic environment in China (Warner, 1985), especially when managers stay in the same posts. As SOEs with a long history dating back to the pre-reform era, the firms studied had a management with low educational attainment. The highest degree held by the managers at or above middle level in the firms studied was at the bachelor level. In BF there were even managers holding only a high-school certificate. Nowadays it is difficult, if not completely impossible, for a holder of a high-school certificate to find a non-manual job in the cities of China. Since the firms interviewed were reluctant to use public recruitment for managerial posts, training became a very important means to update managers. Once or twice a year the firms organised lectures on management skills and theories for their managers, usually lasting one or two days each time. In addition, the firms sponsored some of their managers to study for degrees, although on a small scale. Since 1994, five managers in BF and ten in BA, for example, had taken part-time courses for bachelor degrees, organised by the Party Cadre School of Beijing. However, this kind of course seems to be designed to train bureaucrats rather than modern managers and is therefore unlikely to transform the mental map of the managers. As a manager of BA who had received the training mentioned above commented frankly, "It is impossible to revive the firm by employing people like me and the other managers here. We are familiar with the *Guandao* (the rules of how to get promoted) not with the rules of business."

6.5.4 Management Remuneration and Performance Evaluation

The salary system used for top managers of the firms interviewed was decided by the higher authority. In the three firms both the top managers and the middle ones were remunerated according to a nationwide system, which separated the whole package of salary into technical salary, post salary, service-period salary and allowances. This system puts great weight on seniority and age but little on the abilities required by the posts. Also, in the three firms monthly bonuses were issued generally as a routine, without discrimination among posts at the same level. In addition, the top managers and Party cadres were rewarded by year-end bonus if they fulfilled the targets laid down in the management contracts. The level of such bonuses for the director and the Party secretary was set by the higher government authority. Vice directors got bonuses also set by the higher authority, equivalent to a certain percentage of that given to the director. There were no year-end bonuses for middle managers in BJTE and BF, while in BA such bonuses were issued as long as the firm's financial condition allowed.

In addition to setting salaries for the directors, the higher authority also evaluated their performance at the end of each year. The main criteria were the targets laid down in the management contract. There was also a questionnaire evaluation required by the higher authority, organised by the Party's organisation department within the firms and completed by managers above the middle level. Combining the results of these two evaluation measures, the higher authority would arrive at conclusions on the performance of the directors. The evaluation results were usually kept secret from everyone in the firms except the persons in question. So far no director in the three firms studied had been evaluated as not performing satisfactorily and, therefore, no director had been removed from his post for poor performance.

Table 6.3 The Form for Performance Evaluation Used in BA

Criteria	*Grade*

Source: translated from the Chinese version of the performance-evaluation form used in BA.

Within the firms interviewed, the only performance evaluation for other top managers and those at the middle level took the form of a questionnaire. Such evaluations were organised once a year, again by the Party's organisation department. The questionnaires used for vice directors and middle managers were the same. The questionnaires for vice directors were completed by the director, the Party secretary and subordinate middle managers; while those for middle managers were filled by their subordinates, the vice director they reported to and their peers in departments with whom they had frequent business contact. The format and content of the questionnaire used by the three firms were similar. Table 6.3 reproduces the questionnaire used in BA. It can be seen that the items for evaluation are in some cases vague and associated more with criteria for evaluating Party cadres than business performance. They are also, to a degree, potentially contradictory. For example, the emphasis given to Party ideology versus working efficiently; and fulfilling tasks in line with the desire of superior versus being innovative and adaptive. Based on such an evaluation, none of the vice-directors in the firms interviewed had so far got a negative comment from their superior. There were middle managers who had received negative comments, but the results of the evaluation were not linked to the bonuses they earned.

6.6 Labour

6.6.1 Labour Contracts

The Employment Contract System was adopted in 1987 in BJTE and 1989 in BA and BF. However, the process of implementation was slow and in each of the firms studied less than 30% of the employees were hired on a contractual basis by 1995. Following the Labour Law that was put into effect in 1995, all formal employees were required to work on labour contracts. As a result, by 1999 all of the non-temporary employees in the three firms were employed on the basis of labour contracts.

There can be variation in the duration of the labour contracts, however. According to the Labour Law, those who have worked in their firms for more than ten years or whose retirement is less than ten years away can sign employment contracts with a non-fixed duration. All the other employees are, in principle, required to sign contracts with a fixed time period. But the actual duration is usually decided jointly by the employer and the employee in question, and in practice firms may even sign a fixed-term contract with those who are entitled to a non-fixed term one.

In the three firms interviewed there were a large number of employees who were entitled to a non-fixed term contract. In reality, all these employees, namely about 40% of the workforce in BJTE, about 35% in BA and 30% in BF, signed such a contract with their firms. For those who worked on a fixed-period basis, the duration of contracts was associated with the seniority of their posts, ranging from three years, to five years, and even to eight years in the case of BJTE. In other words, a large proportion of employees in the three firms continued to have a high level of job security.

Since there were more employees than actually needed, the firms studied seldom took on new employees. When they did do so, those recruited had to have Beijing citizenship. In addition to the contractual workforce, the three firms all hired a few temporary workers, usually about 10 in number, to serve as cleaners or security guards.

A degree of employment inflexibility was also in evidence when those on fixed-term contracts faced renewal of their contracts. When a labour contract was due to expire, the firms would ask the immediate superior of the person in question to do a performance evaluation, which seemed only to be a matter of ritual in practice. If the persons had not violated laws and factory discipline, for example, BA would renew all the contracts. In principle, BJTE would terminate labour contracts with those who were not suitable for their posts or there was no need for them. In practice, however, there was space for manipulation. For those who had severe financial difficulty or those who were aged, the firm usually continued their contracts. In BF there had been no cases of a failure to renew labour contracts in the second half of the 1990s.

6.6.2 Labour Rationalisation

Nevertheless, all of the three firms interviewed rationalised their workforces in the mid and late 1990s. Between 80 and 90 employees in BJTE, about 300 in BA and about 200 in BF were given *xiagang* during this period. In addition, the three firms adopted the practice of letting employees retire before the officially designated age, to further slim the workforce. Most of the employees who were affected by this practice were those working on contracts with a non-fixed term. This practice occurred on the largest scale in BF, where 300 employees were streamlined that way. In the three firms, the vast majority of the streamlined employees were shop-floor workers. In BF there were only two employees at the middle managerial level who were laid off, because the departments they worked in (in acquired firms) had been abolished.

The managers interviewed all thought that labour rationalisation had had positive effects. At least, over-head costs were consequently lower, but there were still surpluses in the workforce, especially among support staff. Even so, managers commented during the interviews that they would not continue to rationalise their workforces unless there was a call to do so from the government.

In summary, the traditional SOEs studied were, for a socialist perspective still model employers. A large proportion of their workforces worked on employment contracts with a non-fixed term, and the terms of other employees' contracts were relatively long. Also, the renewals of employment contracts were conducted casually and very few contracts were terminated. Labour rationalisation was not thoroughly conducted in the three firms. They still suffered from overmanning, a problem they were reluctant to tackle because of social and political pressures. The management also thought that it was socially unacceptable for the firms to replace their formal workers with temporary labour that could be more easily adjusted to business needs.

6.7 Conclusions

In this chapter the results of interviews with top management in three traditional SOEs have been reported. All of these firms began operating in the pre-reform era, as part of the Chinese centrally planned economy. They produced outputs according to production quotas and at the same time received government appropriations for development capital. In the 1980s, attracted by huge market demand, these firms began the production of consumer electronic products, after the government-sponsored projects to introduce production equipment from abroad. As licensed consumer-electronics producers, the firms got easy access to bank loans for production expansion. However, when the market for their products turned down, the firms failed to respond positively to the competition, for example through product development. Consequently they fell into financial distress.

Like other SOEs in China, the firms studied had experienced various reform measures after 1979. In the second half of the 1980s the firms implemented the CMRS and introduced contractual employment for a small number of employees. Although the firms had not been corporatised or had not completed the process of corporatisation at the time of the interviews, the general economic reforms that had been introduced since 1993 had impacted on them. New arrangements for social welfare began to be implemented in the late 1990s and employment contracts were applied to all employees after the Labour Law was put into effect in 1995. To a limited extent, these new measures relieved the firms of some of the burdens inherited from the central planning era. Under a nationwide campaign of labour rationalisation in SOEs, the number of employees in the firms studied was reduced and, alongside this, the firms' departments were streamlined. A number of these changes were superficial changes, however; for example, there was very limited employment flexibility brought about by the new employment contracts. Furthermore, there was little change in the firms' institutional environment and, in general, managerial behaviour had, therefore, not changed much.

As explained in Chapter 3, according to socialist ideology state firms belong to 'the whole people', but in reality no one really owns the firms. As the representative of 'the whole people' in the management of SOEs, there is a real danger that higher government authorities lack incentives to pursue economic efficiency. Instead, they can be expected to impose political goals on the management of the firms. This is all borne out in my study. Although in the 1990s more autonomy was granted to the three firms studied, control from higher government authorities still continued. The supervisory authority still appointed the directors and the Party secretary, decided which salary system was used and set the total amount to be paid out in salaries for the firms. By laying down targets in the management contracts, the government could influence the setting of the firms' objectives. Nominally, under the 1990s' reforms, the higher authority should no longer intervene in the internal affairs of the firms; but in reality approval from it still had to be secured before any important investment and employment decisions were made. Disastrously for the firms' future, there was evidence of orders from above that clashed with the pursuit of commercial goals, such as those that required BA and BF to acquire other state and collective firms in poor financial condition.

As old SOEs, the firms interviewed used to get their capital from higher government authorities and this practice did not stop in the 1990s, in spite of the banking reforms. Serving as a medium between the firms and banks, government agencies continued to direct bank loans into the firms. Even high liabilities-to-assets ratios and accumulated unpaid loans did not stop money from being pumped into the enterprises. With continuing soft budget constraints, the three firms were still sheltered from the full effects of market competition and were protected from failure in the marketplace. This in turn can be expected to have reduced the incentives for the firms to improve their business performance.

Within the firms studied, the major managerial posts were occupied by cadres with a mental map ill-adjusted to the new economic environment in China. Meanwhile, internal control and incentive systems were poorly designed and implemented. Bonuses were not connected to the overall performance of the firms and particularly the performance of individuals. With ambiguous and somewhat contradictory criteria, internal evaluation of performance was carried out loosely, serving more as a ritual than as an effective incentive and control mechanism. Perhaps realising the drawback of such evaluations, the firms studied took no serious action against those who received a bad evaluation. Similar practices were also found in the renewal of labour contracts. Business needs and previous individual performance were not necessarily the crucial criteria; social and political factors also weighed heavily. Since there were more employees than actually needed and most of them worked on contracts with relatively long terms, the workforces of the firms remained very rigid.

In short, on the basis of these detailed study of three traditional SOEs in the CEI, it is possible to conclude that the institutional arrangements under which the traditional SOEs operated remained, in large part, unchanged. In spite of more market elements introduced in the 1990s, bureaucratic mechanisms still seem to have played a dominant role in co-ordinating the activities of the state firms.

In the next two chapters, five collectives and four joint ventures are studied, respectively, to provide a comparison with the behaviour and structures found in the state firms studied. Once again, the studies are based largely on interviews undertaken with senior management in early 2000.

7. Case Study II: Collectives

In the last chapter the results of interviews with senior managers in three traditional SOEs were reported. The evidence suggested that behaviour patterns in these state firms have not changed much in the second half of the 1990s. In this chapter, the cases of five collectives are presented, providing a comparison with the state enterprises. Two of the collectives are located in Beijing; they are Beijing Yadu Science and Technology, Ltd (BJYD), producing air moisteners and air purifiers; and Beijing Jinghai Group Company (BJJH), producing air conditioners. Another two collectives are based in Jiangsu province: Nanjing Hongqi Radio Factory (NJHQ) in Nanjing city, producing radios and cassette recorders (CRs), and a township firm (JSXK) in the county of Luoyang, producing audio and video (AV) products. The last firm is a producer of speaker systems (GZTP), located in Guangzhou city in Guangdong Province. A little different from the other four firms, BJYD was transformed into a joint stock company in 1992. It is grouped with the other four collectives in the case studies because the main aim of the transformation, as will be shown below, was to raise capital. The firm's behaviour pattern has changed little.

The text in this chapter is arranged in a similar way to that in the last chapter. After an historical overview of the firms, the external relations of the firms are explored in order to identify the degree to which they are independent market players. What follows first is a discussion of the internal organisational structure of the firms. The particular issues addressed second are managers' appointments, management remuneration and evaluation, in an attempt to explore the role played by internal control and incentive mechanisms. The third set of issues is concerned with the workforce and considers how well or badly the firms' employment practices have served their business needs. Finally, conclusions are drawn based on a comparison of the collectives with the traditional SOEs reviewed in chapter 6.

The five collectives can be divided into two sub-groups. It will be seen from the case studies that NJHQ behaved more like a traditional SOE, because of its original development which shaped, and still impinges on, the mental attitudes of the firm's managers. The other four firms had similar behaviour patterns, although the exact practices are different. It seems that the difference between the four firms and NJHQ lies in the institutional arrangements they face. With a further distance from government agencies, BJJH, BJYD, JSXK and GZTP showed more market orientation in objectives and internal organisational structure than NJHQ. Furthermore, they used much tighter internal control and incentive mechanisms to ensure the fulfillment of business goals, and were more likely to adjust their investment and employment according to market signals. In sharp contrast, NJHQ operated under similar institutional arrangements to those found in the traditional SOEs. It had a higher government authority that set business targets and channeled capital to the firm before the 1990s. What was different from the three SOEs discussed in the last chapter was that, because NJHQ was relatively small in size, the government stopped direct financial assistance to the firm in the 1990s.

7.1 Overview

Of the five collectives, NJHQ has a much longer history, which began in the 1950s. Although the history of JSXK can be traced back to the late 1960s, its experience in the electronics industry began in 1979. The other three firms are much younger; all were set up after the advent of the economic reforms and the open-door policy. These three firms, together with JSXK, performed very well in the 1980s and/or in the 1990s, while the financial condition of NJHQ began to deteriorate in the same period. The overview of GZTP is much shorter than that of the other firms. This is because this firm was established more recently. Furthermore, because GZTP is a collective with the nature of a family business, the manager interviewed was reluctant to talk too much about processes in the firm's development. Although semi-structured interviews were conducted only with senior managers of the five collectives, I was shown around the factories of JXSK and chatted with several managerial staff and technicians. Information from the informal conversations was also used in the case studies. Table 7.1 provides background information on the firms.

Table 7.1 Background Information on the Collectives

Firm	Main products	Number of employees
BJYD	Technological services (1987-1989) Air moisteners (1989 onwards) Air conditioners (1995-1997) Air purifiers (1997 onwards)	Less than ten (1987) Less than 50 (1990) About 200 (1992) About 1000(1999)—200 contractual and 800 temporary.
JSXK	Radios (1979-1984) B&W TV sets (1983-1989) Colour TV sets (1989-1990) CRs (1984-1994) VCD players (1994 onwards) DVD players (1998 onwards)	Less than 100 (1979) About 6000 (1999)---about 2000 salesmen, around 1300 contractual employees, and 2700 temporary workers.
BJJH	Technological services (1983-1989) Air conditioners (1989 onwards)	Nine (1983) About 300 (1985) More than 2000 (1999)—1300 contractual and 700 temporary
GZTP	Speaker systems (1993 onwards)	More than 100 (1993) More than 300 (1999)
NJHQ	Radios (1969-1987) TV sets (1984-1986) CRs (1987-1993) Pagers (1997)	About 100 (1954) About 300 (1969) About 1400 (1979) About 1300 (1988) More than 500 (1999)

7.1.1 Beijing Yadu Science and Technology Ltd. (BJYD)

The main founder of the firm was Mr He. In 1987 he resigned from a state-owned research institute and established the firm with friends. The establishment was registered as a collective because at that time there was strict control by the government on private businesses, such as on product lines and the number of employees. With privately borrowed money, the firm began its business by providing technological services and doing trades. The financial return on these businesses was so good that the private loans were repaid in less than one year. It then began to accumulate capital. In 1989 the management of the firm decided to focus its future business on the production of air moisteners (AMs), a product completely new to Chinese consumers at that time. After taking apart a sample set from Japan and studying the structure and mechanism, the technicians of the firm developed an air moistener by imitation. With initial capital from previously accumulated profits and 500,000 Yuan borrowed from other firms, the firm began production, with less than 50 employees. Output was small in quantity in the early stage, namely several hundred sets in 1989 and several thousand in 1990. Because it was the first domestic producer of AMs, the firm's products sold quickly, thus laying a financial base for later production expansion. In 1992, the annual output volume expanded to 40,000 sets and the number of employees increased to about 200.

The management knew very clearly that there was great potential demand for AMs in China, especially in Northern China, where it is usually dry in the spring, autumn and winter. The only way to harvest this market advantage was to further expand production before other firms entered the industry. However, self-accumulated capital was limited and it was impossible at that time to obtain bank loans, not only because the firm was still small in size but because it was a collective without support from a higher government authority. Fortunately, in 1992 experiments with establishing joint stock companies began in Beijing. Realising that bringing in other equity holders was an efficient way to raise capital, the founders of the firm lobbied the government for corporate status. Considering the high growth rate of and great market prospects for the firm, the Enterprise Reform Office of Beijing approved the firm's application for status as a joint stock company. However, a restriction was placed on the shares of the firm. They could only be issued to institutions and were not allowed to be issued and traded publicly on the stock exchanges. Nevertheless, with capital raised by selling equities, BJYD further expanded the production of AMs. By the end of 1999 the firm's share of the Chinese domestic AM market was more than 80%.

In 1995 the management decided to produce air conditioners (ACs), in an attempt to diversify. Thirty million Yuan was invested in the production. Unlike the situation in the 1980s where collectives like BJYD, which operated outside the planning system of China, were usually unable to obtain bank loans, the reform of the banking system in the 1990s had relaxed the restriction on issuing loans to non-state firms, provided they had the ability to repay. Because of the firm's good business record and because it had grown in strength and in size, the firm obtained bank loans for most of the capital to produce ACs. The actual market conditions, however, were not as rosy as expected. When BJYD entered the AC industry, a market war in AC sales had already begun in China. As a new entrant, BJYD failed to gain a market share large enough to keep unit-costs of its products low so that price exceeded production costs. To make things worse, the top management of the firm split. Some of the founders left the firm, taking with them the main AC technical staff. After two years struggling, the management decided to stop the production of ACs.

Learning from this lesson, the management became cautious when introducing new projects. At the end of 1997, it began the production of air purifiers (APs) after careful market research. This time the capital came totally from self-accumulated profits. When the firm's products were put on the market in 1998, the sales were very good. At the end of 1999, APs accounted for about 30% of the firm's total revenues, and the company's share of the Chinese domestic market was between 20% and 30%, only second to Philips.

By the end of 1999, BJYD had total assets valued at 600 million Yuan, a large proportion of which were intangible assets, such as technical patents and the brand name of 'Yadu'. The number of employees increased with the company's development, reaching about 1000 by 1999. Of the workforce, 200 were formal contractual employees and the remainder were temporary or seasonal workers.

7.1.2 Township Firm in Luoyany County, Jiangsu Province (JSXK)

This firm developed from a township factory established in 1968, producing and repairing cement boats. As a small firm located in a small county - at least at that time - the factory did not receive production quotas. In the late 1970s the demand for the firm's products and services shrank dramatically. With less than 100 employees, the majority of whom were illiterate, the firm fell into great financial difficulty. In order to save the firm, an announcement was made by the officials in the county government that anyone who could find ways for the firm to prosper would be entitled to manage it. Mr Qin, a technician who had the highest educational attainment in the firm, took up the challenge.

In order to find a product that could help the firm out, Mr Qin travelled around Jiangsu province, Zhejiang province and Shanghai city to do market research. After visiting some state- and collective-owned electronics producers, he found that there was great market potential for radio receivers and B&W TV sets in the late 1970s. However, in the later 1970s, China lacked domestic technology and equipment to produce B&W TVs. Because it was a small factory on the periphery of the central planning system, it was impossible for the firm to get state appropriations to import equipment for TV-set production; but the capital requirement for radio production was low and it was not difficult to get technical assistance from other firms. Considering these factors, Mr Qin decided on radios as the firm's main product.

With a capital of 8000 Yuan borrowed from other firms, the management bought equipment and the production of radios began. The sales of the firm's products were very good and, after repaying its debts, the firm began to accumulate capital. This provided the majority of funds for the firm's investment projects in the 1980s and the early 1990s. Because of the differential features of its products, such as attractive designs, the firm managed to subsist in the early 1980s, when most of the radio producers in the surrounding areas went out of business. In the second half of 1983 it began to produce B&W TV sets. In 1984, with technical assistance from a state-owned consumer electronics producer, the firm also started producing cassette recorders (CRs), under the brand name 'Global', which was also used by the state firm. In 1984, with an output volume of 10,000 sets of CRs and 60,000 sets of B&W TVs, the firm achieved sales revenues of 28.5 million Yuan.

Based on the CR production, Mr Qin established a product development team, staffed by technicians and engineers trained with assistance of the state co-operator. Technical strength brought in better sales. In 1988, for example, the sales revenue of the firm was about 100 million Yuan. New products were added to the product portfolio in the next few years, such as colour TV sets in 1988, which were dropped in 1990 because of unsatisfactory sales; and walkmans and speaker systems in 1990. The production of the latter stopped when the firm entered the production of VCDs in the mid 1990s and DVDs in the late 1990s.

In 1993 the management renamed the firm as JSXK and gave up the brand name 'Global' for a new one, 'Shinco'. This symbolised its break-up from the state-owned co-operator, which was trapped in financial difficulty in the 1990s (Shi, 1999, ch.7). In 1994 the technical staff developed the firm's first VCD players and, in 1995, quantity production began. Because of its early entry into the VCD industry and the reliable technical features of its products, JSXK soon became a major VCD producer in China. Sales revenues reached 2,423 million Yuan in 1998 and the brand name 'Shinco' earned a reputation all over China for quality. In order to sustain the firm's competitive advantage, the management put enormous attention into product development. In 1997, the firm's technicians initiated in the Chinese market VCD players with three discs (internal documents). It was the management's obsession with quality and new product features that got the firm through fierce competition in the VCD market during 1996-1998, to which BA, the SOE discussed in the last chapter, fell victim. In the face of a declining market demand for VCDs in the late1990s, in 1998 JSXK began to produce DVD players by assembling components imported from Toshiba in Japan. In 1999 the product development centre of the firm developed its own DVDs and quantity production then began. At the end of 1999, with 28 production lines for disc players and production capacity of 170,000 sets per day, JSXK became the largest production base for disc players in China (internal documents).

By the end of 1999, the total assets of JSXK were valued at about 758 million Yuan, of which net fixed assets were about 200 million Yuan. The sales revenues in the same year were about three billion Yuan, more than six times as much as that in 1993, when the firm began using its current name (internal documents). The total number of employees had reached 6000, of which about 2000 were salesmen working in the firm's sales network across China. Among the other 4000 employees, only one-third were formal contractual employees; the others were hired on a temporary basis.

7.1.3 Beijing Jinghai Company (BJJH)

BJJH was founded in 1983 by Mr Wang and eight other engineers, after they gave up their jobs in a state-owned research organisation. Mr Wang's abandonment of the 'iron-rice bowl' of state employment caused interest and controversy in China, at a time when economic reform was still in its infancy. Both national and local newspapers reported this incident. Like BJYD, the new firm was registered as a collective so as to escape the government's restriction on private businesses.

In the beginning, the engineers of the firm received computer-engineering projects, which brought in revenues of four million Yuan and profits of 400,000 Yuan, by four months after its establishment. The high financial return led to an investigation organised by the Commercial and Industry Bureau, the Audit Bureau and the Discipline Committee of Haidian District, Beijing. Thanks to some open-minded government officials in Beijing and continued relaxation of the economic and social environment, the firm survived the hostility to its commercial success.

Through accumulation, the firm's capital grew from 20,000 Yuan, which was received from its first engineering project, to total assets valued at one billion Yuan by the end of 1999. With the capital accumulated in the early years, the management invested in the production of ACs in 1989, which soon became the firm's main business. The best time for the firm's air-conditioner business was during 1990 to 1992, when it contributed to more than 80% of the firm's total revenues. When competition in the market for ACs became fierce, the management opened other product lines in order to share business risks. In 1999, the sales of ACs brought in revenues of more than 300 million Yuan, and other businesses, namely computer engineering, agricultural machinery, property management and other electronics products, brought in about 200 million. Alongside the business expansion, the workforce grew from nine people - Mr Wang and 8 other engineers - to about 300 in 1985 and further to more than 2000 by 1999.

7.1.4 Audio-product Manufacturer in Guangzhou (GZTP)

GZTP was established in 1991 by Mr Liu and his relatives. Immediately after he got his BEng from a university in Guangdong Province, Mr Liu did not, like most university graduates in China, look for a good position in a sound company. Instead, he borrowed a large amount of money from his relatives in Hong Kong and set up with several mainland relatives a firm to produce audio products. The establishment was registered as a collective at that time, although it was more like a family business in nature.[5]

With more than 100 workers, the majority of whom were temporarily hired, GZTP began to produce speaker systems in 1991, at first in small quantities. The scale of production later increased. In 1993 sales revenues were more than 20 million Yuan and the fixed assets were valued at about 10 million Yuan. This good sales record enabled the family business to accumulate capital for further business expansion. By 1999 the firm owned two factories to produce audio products with more than 300 workers and total assets of more than 30 million Yuan. Sales revenues exceeded 100 million Yuan in the same year.

7.1.5 Nanjing Hongqi Radio Factory (NJHQ)

NJHQ was established in 1954 by merging two community-owned collectives. It was not until 1969 that it began producing electronic products, at first radios under the brand name 'Baoshihua' (meaning gem flower). Different from the four collectives reviewed above, NJHQ operated under the central planning system, receiving output quotas and inputs from higher government authorities. In 1976, after the introduction of a project for equipment transformation funded by government subsidies, the firm was able to produce more than 40 radio models. At that time all of the firm's finished products were collected by a state-owned commercial network, which was made up of provincial and municipal wholesalers and their subsidiaries and retail stores. The firm began to produce TV sets in 1984, but the production stopped two years later because of a lack of adequate technical and equipment support. In 1987, NJHQ started producing CRs. The output volume in that year was about 180,000 sets, which, again, were sold through the state-owned outlets.

In the early 1980s, sponsored by government, state-owned commercial organisations were able to pay for goods collected from state and collective firms. However, in the late 1980s bank credits were tightened to the state-owned distribution network. This resulted in delay in payment and sometimes even no payments for collected goods by the network. NJHQ was one of the victims of this problem. In 1989 the amount of unreceived payments from state-owned commercial organisations reached a peak of 24 million Yuan. This led to a financial crisis in the firm. When the commercial network for most consumer products eventually unravelled in the 1990s, finished products piled up in NJHQ. In the early 1990s the firm stopped almost all of its production.

[5] The firm was preparing to transform into a private company when I visited it, because government

In 1994 the factory director retired after more than fifteen years in the post. Because of the financial difficulty faced by the firm, no one was willing to take over. Finally, the supervisory authority, the Electronics Industry Bureau of Nanjing, intervened and transferred a director from a state firm. However, NJHQ was now in such a mess that the new director soon left and without getting approval from the Bureau. His leaving led to three months of chaos in the firm, which ended with the appointment of the current director. He was persuaded by the supervisory bureau to take on the job, on the understanding that he would not have to achieve business improvements. Rather, he was required to maintain social stability among the firm's more than 1000 employees, most of whom were old.

In 1997, assisted by the Nanjing electronics bureau, NJHQ co-operated with a Taiwan business to produce pagers. This project, however, was soon terminated because the market for pagers in China was dealt a hard blow by sharp price decreases for mobile phones. After the failure of this venture, no new effort was made to look for products that had the potential to restore the firm's fortunes. At the time of the interview, the management was attempting to shift the firm's business focus to the service industry. Encouraged by the bureau, they were looking for a real estate developer to co-operate in property management, on the land where the firm was located.

Alongside the decline in performance, the workforce of the firm decreased. By the end of 1999 there were more than 500 formal employees and over 400 retired workers, one fourth of whom had retired before the official designated age. The nominal value of gross fixed assets increased from three million Yuan in 1976 to five million Yuan in 1999, but most of the increase happened in the 1980s when the production of CRs expanded. There had been little net investment since then.

7.1.6 Sub-summary

From the histories of the firms, it is very clear that NJHQ was different from the other four collectives. Starting their businesses after the economic reforms, the other four

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restrictions on private businesses were relaxed in China in the late 1990s.

collectives studied had been subject to market competition since their early years. Outside the mainframe of the central planning system in China, they did not receive direct financial assistance from government and therefore had to raise capital through profit accumulation. Operating in the market place, they had experienced successes as well as failures; once a failure occurred, it was the firms' management that had to find ways to cover the losses incurred. In contrast, the older NJHQ had been integrated into the central planning system since its establishment. It received production quotas and subsidised capital from government authorities and sold products to state-owned outlets. It is not surprising, therefore, that the fate of NJHQ was more similar to that of the traditional SOEs reviewed in Chapter 6, except that, being a minor player in China's economy, NJHQ was left outside the government's financial support net in the 1990s. As in the cases of the traditional SOEs interviewed, there seemed in NJHQ to be little evidence of an entrepreneurial spirit. By contrast, an entrepreneurial spirit appeared in the other four collectives studied, as the previous and following discussions underline.

7.2 External Relations

7.2.1 Relations with Government Agencies

The relations of the five collectives with government agencies were not as uniform as those found in the three traditional SOEs studied in the last chapter. An arm's-length relationship was most obvious in the cases of GZTP, BJYD and BJJH and, to a lesser extent, in JSXK. On the other hand, the relations with superior authority in the case of NJHQ were similar to those of traditional SOEs.

GZTP, BJYD and BJJH had no superior government authority. The only direct relation between them and government agencies was that the firms paid taxes. Since their establishment, the firms had operated outside the planning system and had received no capital and labour inputs from government. Therefore, there was no ground for government to intervene in the management of the firms. The management of the firms made all of their own business decisions, provided their practices were in accordance with the laws of China. At times, they did receive some support from local government, but not in the form of soft capital. BJJH, for instance, survived a hostile environment in its early stages of development with support from some reform-minded officials in the Beijing municipal government. Another example was the corporatisation of BJYD. It is almost impossible in China for a collective with unclear property rights over its assets to transform into a joint stock company without support from the Enterprise Reform Office in Beijing.

JSXK, a typical township firm, had relatively stronger relations with government agencies. Nominally, the firm had a superior authority, the Changzhou municipal government. In addition to taxes, the firm was sometimes required to hand in some locally regulated charges. For example, it was required to donate 20 million Yuan to construct the road in front of its main factory. The relationship was reciprocal. For example, in return for locally imposed charges, in the 1980s the government of Changzhou city provided JSXK with financial support in the form of tax-reduction and sometimes tax-exemption. This had facilitated the accumulation of capital in the early stages of the firm. However, because there was no direct financial input from the local government, it was not entitled to intervene in the firm's business affairs.

The relationship of NJHQ with government agencies, on the other hand, was different from that of the above four firms. Embedded in China's central planning system, the firm had been subordinated to the Electronics Industry Bureau of Nanjing since it began to produce radios in 1969. It received production quotas from the Bureau in the pre-reform era and asked for approval for investment projects so as to secure subsidies and/or bank loans. The higher authority also appointed the main top managers, namely the director and the Party secretary, and evaluated their performance. Furthermore, it set the objectives and development direction of the firm, mainly through the management contracts signed with the director under the Contract Management Responsibility System (CMRS). When the business of NJHQ worsened in the 1990s, the Bureau clearly stated that the main task of the management was to maintain stability among the workers. In the management contract signed by the current director there was no solid target for profit. After the failure of the pager production, a decision was made, with the encouragement from the Bureau, to shift the firm's business focus to property management.

The relationship of NJHQ with higher government authority appeared very similar to that found in the traditional SOEs discussed in the previous chapter. The solution to the financial difficulty faced by the firms was strikingly similar too. The only obvious difference probably lies in the fact that, although it had not abandoned NJHQ, the government did not make active efforts to revive the collective, especially in the form of facilitating soft bank loans. By contrast, it did do so in the cases of the three traditional SOEs discussed in Chapter 6.

7.2.2 Relations with Banks

As far as the relations with banks are concerned, again, the five collectives can be divided into two groups, with BJYD, BJJH, JSXK and GZTP as one group and NJHQ, on its own, as the other.

In the early stages of development, BJYD, BJJH and JSXK did not take any bank loans and all of their capital was raised through a process of profit accumulation. The reliance on this sole capital source was due partly to the fact that banks were not willing to issue loans to non-state firms in the 1980s, no matter how promising the firms' businesses plans. It was not until the 1990s, when restrictions on issuing bank loans to non-state firms were relaxed, that these collectives began to increase their dependence on bank financing. For example, JSXK took bank loans amounting to 80 million Yuan for technological transformation during 1994 and1996, and repaid these loans on time. Because of its good business record and accumulated credibility, the firm succeeded in obtaining further bank loans, of more than 100 million Yuan, for its second round of technological transformation. These bank loans, together with self-accumulated capital, contributed to JSXK having world-level production equipment (brief informal interviews with some technicians).

The interviews suggested that the management of the four firms usually considered in advance and very carefully possible risks involved in and potential returns on investment projects. Unlike the three traditional SOEs in the last chapter, the senior management of the four collective firms had to take full responsibility for the repayment of bank loans they obtained. After the project of technological transformation, for example, the management of JSXK decided not to apply for any more bank loans because no project had arisen that was considered to be sufficiently profitable. As another example, having learnt from the failure of the AC project, most of whose capital came from bank loans, the senior management of BJYD took a more cautious approach towards the production of APs. This time all of the capital came from profit retention.

By contrast, NJHQ had a totally different relationship with the banks. The project of technological transformation in 1976 was funded by government subsidies. A majority of the capital for the expansion of radio production and for the introductions of TV and CR production in the 1980s came from bank loans. These loans were obtained after the projects were approved by the Nanjing Electronics Industry Bureau. In order to solve shortages in working capital caused by the delayed payments from goods collected by state-owned outlets, the firm succeeded in obtaining bank loans of more than three million Yuan, with the superior bureau as a medium. Even when the production of both radios and CRs stopped, NJHQ, which was now on the verge of bankruptcy, still obtained about one million Yuan in bank loans in 1993 to construct an office building. Such money flows stopped after 1994, under the government guideline of 'grasping large-sized firms and letting go of the small ones'. Nevertheless, in total, the firm had obtained bank loans of more than 13 million Yuan, of which only two million Yuan had been repaid. The amount of loans was large, especially compared with the firm's fixed assets of five million Yuan.

All in all, the approach to financing taken by NJHQ stood in sharp contrast to that of the other four collectives. Like the traditional SOEs studied in Chapter 6, NJHQ has shown a greater reliance on government subsidies and soft bank loans for financing and without careful consideration of the return on investment projects against potential risks.

7.2.3 Relations with the Market

BJYD, BJJH, GZTP and JSXK had been operating according to market signals since their establishment or, in the case of JSXK, since it began to produce radios in the late 1970. Producing saleable products and getting finished products sold seemed to be the only way for them to survive and develop; so their objective was very straightforward - make profits.

To achieve the goal of making profits, the management of these firms seemed obsessed with the quality of products. For example, there were in BJYD annual targets that required the firm's product development centre to achieve a certain number of product innovations or improvements. The management also kept a close eye on the current quality and features of its products. For instance, in 1993, one month after a new AM model was introduced to the market, BJYD made an announcement in newspapers that there was a flaw in the design of the new product. The management agreed to refund any consumers who returned the products and, as compensation, gave a discount of 50% on any other model of the AMs they subsequently bought. A similar obsession with product quality can be found in JSXK. In order to achieve a zero defect-rate, the firm was restructured in 1997 according to the ISO9001 Quality System. Business targets revolved on product development, technology improvement and market sales.

Market consciousness was also reflected in active efforts of JSXK's senior management to introduce and absorb advanced technology. In the early 1980s the firm produced radios and CRs by learning from SOEs, where the technology for these products was mature. In the middle 1980s it learned from and imitated the technical designs of audio manufacturers in Hong Kong. Imitating Japanese electronic producers, the product features and designs of Hong Kong manufactures was much more advanced than that of most Chinese SOEs. In the early 1990s, in recognition of the low technical grade involved in the electronic products produced by Hong Kong manufacturers, the management of JSXK decided to miss out Hong Kong and learn directly from the Japanese. After 1992 all technology exchanges were conducted directly with Japanese companies. It was reported by the manager interviewed that this change in the source of technological know-how was a major contributor to the firm's current prospects. By learning from Japanese companies, JSXK produced VCDs and DVDs with attractive features and therefore survived the extremely fierce competition in the market in China for VCDs in the later 1990s. This was a time when many other domestic VCD producers, including BA, a traditional SOE described in the last chapter, fell victim to competitive pressures.

In sharp contrast, NJHQ seemed paralysed when there was a need for it to compete in the market. In the era of central planning the management did not need to worry about outlets for the firm's finished products. The outputs were totally absorbed by the state-owned commercial network, where products were usually collected by major wholesalers at the provincial and municipal level and then were distributed to subsidiaries and retail stores at lower levels. When economic reform began in the 1980s, this 'level-by-level' (Child, 1994, p.131) distribution system lost its monopoly position; more and more manufacturers began selling their products directly to distributors at various levels. However, NJHQ still relied solely on the state commercial system for its products and produced according to orders for goods from this distribution network. In the late 1980s, when the subsidies to the state distributors were reduced and later stopped, payment from the state commercial organisations for the firm's products was delayed. In ignorance of the actual market situation, the management continued to expand output because the firm continued to receive orders from the state-owned outlets, and in a belief that payment for goods would eventually arrive. When the state distribution network finally unravelled in the 1990s, the firm found itself hopelessly uncompetitive in the absence of its own marketing force and market know-how. In short, the displacement of NJHQ in the market in the 1990s resulted from the fact that it had never previously exposed itself to the market.

7.2.4 Sub-summary

NJHQ, and also those traditional SOEs discussed in the last chapter, behaved very differently to the other four collectives. Under the same industrial management system, NJHQ and the traditional state firms studied depended mainly on government agencies for capital and were subject to administrative intervention in their major business decisions. Used to the protection in the market provided by the reliance on superior authorities and soft bank loans, the management of NJHQ failed to develop abilities needed to compete in the marketplace. Once they had to face hostile market competition, the business of the firm collapsed. By contrast, the management of the other four collectives studied seem to have run their businesses according to market rules. Without intervention and direct financial support from government agencies, the management were free to set objectives and to decide the firm's development. Since the firms depended solely on their success in the market, the management were tuned to pursuing profits and were cautious about the way money was spent. Learning from experience, they developed abilities and accumulated knowledge which were valuable in competing in the market. It seems that it is the difference in the institutional environment between NJHQ (and also the three traditional SOEs reviewed in Chapter 6) and the other four collectives that determined their different internal management practices, which are detailed in the following sub-sections.

7.3 Internal Structure

Compared with NJHQ, the other four collectives had a slimmer structure, a structure well adjusted to business requirements. For example, before 1997 there were only four departments in JSXK; although the number increased to six, after it undertook an organisational restructuring according to the ISO9001 Quality System. Of the six departments, four were concerned with either product quality or production, serving very well the firm's obsession with product quality. BJYD and BJJH were restructured in 1994 and 1995 respectively, in order to eliminate structural fat that had been accumulated as the firms grew in size. Consequently, in BJYD, for instance, only the financial department and the chief executive's office were retained at the headquarters level and all of other functions were delegated to its affiliates. In GZTP, there were no formal departments in charge of the major administrative and management functions; family members controlled almost every aspect of the business.

In addition, the management of these firms paid great attention to marketing and R&D activities. For example, there were in JSXK a R&D centre and a marketing centre, both of which reported directly to the general manager. Under the marketing centre, a nation-wide sales network was set up in 1997, consisting of 38 sales agencies and 270 sub-agencies across the whole country. The manager interviewed commented that this sales network had contributed greatly to the firm's good sales record in the late 1990s. In BJYD a commercial network company, which employed about two-thirds of the total non-manual employees of the firm, was set up in 1994 to organise sales activities as well as to conduct market research. In addition, BJYD and BJJH all had a product development centre in charge of product innovation. Every year BJYD spent between 5% and 10% of its turnover on R&D, and by the end of 1999 BJJH had spent more than 10 million Yuan on product innovation.

By contrast, most of the departments in NJHQ seemed to be superfluous. Of the eight departments of the firm, at least five, namely the procurement department, the equipment department, the inspection department, the technical department and the measurement department, were not functioning at all because production had stopped. The main reason for the existence of these departments lay in a desire to provide as many posts as possible for the employees; this reflects a concern for social stability that could also be found among the traditional SOEs studied (see Chapter 6).

Overmanning was also apparent in the structure of the Party organs in NJHQ. There was a full-time Party secretary and a part-time vice secretary in the firm. Although formal Party departments, such as the organisation department and the publicity department, had been abolished, the whole set of such functions had been retained and there were full-time employees in charge of each of them. This compares with BJJH, BJYD and JSXK, where there was no Party staff except a part-time Party secretary, who was usually the general manager or the CEO. In GZTP there was no Party presence at all because it was a family business.

7.4 Management

7.4.1 Management Appointments

As in the three traditional SOEs discussed in Chapter 6, appointment of the director and the Party secretary in NJHQ was decided by the higher government authority. The current director was appointed by the Nanjing Electronics Industry Bureau in 1994, after he was persuaded on the understanding that he was not required to achieve significant business improvements. Following the appointment of the director, the superior authority appointed two vice directors, who were nominated by the director. Managers at lower levels were appointed by the senior management. Between 1995 and the time of the interview there were no personnel changes at either the top or middle managerial levels in NJHQ.

In each of BJJH, BJYD and GZTP, the major founder had been the CEO or the general manager since establishment. In JSXK Mr Qin became the general manager of the firm after he saved the small township factory and transformed it into a successful electronics producer. Other managers at the top and middle levels of the firms were appointed by the firms' CEO or general manager, although the ways of selecting candidates differed.

With the development of BJYD and BJJH, more posts at the vice general manager level were created in the firms, but some of them were set up without much serious thinking and therefore were superfluous. Fortunately, this problem was soon recognised. The number of vice general managers decreased from nine to five in BJYD during 1995 to 1998 and from eight to five in BJJH during 1994 to 1996. Some of the holders of the abolished posts left the firms, while those who remained took posts at lower levels and usually at lower salaries, unlike the common practice in the traditional SOEs studied. Furthermore, in the two firms managers at the levels lower than vice director were appointed by their immediate superior without approval from higher levels.

With a high turnover of staff, especially at the middle managerial level, BJJH and BJYD depended mainly on the labour market to fill the job openings. The most important concern when choosing candidates was whether their abilities matched the requirements of the post. Residence rights did not stand in the way of recruitment.

In GZTP the important managerial posts were filled by family members. Although a professional production supervisor was recruited, his role was limited to ensuring smooth production. In order to keep a close eye on the behaviour of the supervisor, an accountant, who was one of the family members, was sent to the plant. The concern behind such tight control was to safeguard the well-being of the family business and its assets.

In JSXK there were only two vice general managers, both of whom had been working for more than ten years beside Mr Qin. But when the firm was restructured and the sales centre and the R&D centre were set up, two new posts at the vice general managerial level were created to take charge of the two centres. In addition, the organisational restructuring generated two extra posts at the middle managerial level. Located in a small town, the firm did not use the labour market to fill the vacancies. It was concerned that recruits from outside the county might not make a long-term commitment to the firm. Owing to the same consideration, the senior management had a deliberate bias when recruiting non-local university graduates for managerial or technical posts; they only considered those who were from villages in China. In recognition of the limitation of the firm's employment policies on improving the quality of the workforce, the management often used bought-in services from professional consultancies. For example, in 1997 they asked some marketing experts to set up the firm's nationwide sales network.

7.4.2 Management Remuneration and Performance Evaluation

As in the three traditional SOEs studied in Chapter 6, the salary system used in NJHQ was determined by its superior government authority. In the 1980s, the salary system used in the firm was the same as in SOEs; that is, salaries were differentiated mainly according to the seniority of the post and the length of previous service. When the business shrank in the 1990s and production eventually stopped, these differences in salary were removed. Salaries were now only associated with the age of the employee. Since there was little business, there was no bonus and no increase in salary after 1993. Following the ending of production, the only revenue source for the firm was property letting, from which the salaries of the employees were paid.

Every year the director of NJHQ was evaluated by the higher authority according to targets laid down in the management contract; but this was only a ritual exercise because there were no exact business targets. Within the firm, the other managers were evaluated once a year in the form of a report written by their superiors. Although internally there was a target for turnover, which was divided and assigned to the property management and the production divisions, there was no reward to those who fulfilled the target and no punishment for those who did not. The interview with the factory director suggested that no one took seriously the internal business targets.

In the other four collectives, an annual salary system was used for top managers. Under this system, there were monthly salaries and year-end bonuses that constituted the bulk of the top managers' incomes. The amount of the year-end bonuses for the general manager was set in association with the firm's business record and, in the case of BJYD, under the supervision of the board of directors. The salary level of other top managers, especially the amount of the year-end bonus, was set as a certain percentage of the amount earned by the general manager, according to the nature of the post.

Middle managers in the four firms were remunerated by the firms' own salary systems, usually consisting of basic wages and bonuses; but the level of the bonuses was set differently in the different firms. In JSXK there were strict targets for the R&D centre and the sales centre, on which the bonuses were determined. This was especially true in the sales centre, where the incomes of the salesmen were determined completely by how many orders were secured and how well pre- and after-sales services were delivered to customers. In other parts of the firm, bonuses for middle managers were issued monthly, according to the business record of the firm. When the business situation was not very good, for example in 1999, bonuses for all the employees were cut; the higher the post, the greater the reduction. Because most of the middle managers were old, local employees, who had worked in the firm alongside Mr Qin for many years, no formal evaluation was imposed on them. The senior management usually would not remove them from their posts, to save their 'face' - saving 'face' is an important element of Chinese culture. In order to minimise the negative effects of this practice on the performance of the firm, Mr Qin and other top managers monitored the local middle managers closely and pushed them to work hard. For those who still showed no sign of improvement, Mr Qin gradually transferred their responsibilities and authority to other persons with what were felt to be the right qualifications and ability, but did not remove them from their posts. However, when non-local managerial or technical staff were judged as not qualified for their posts, the firm dismissed them without hesitation.

In BJJH and BJYD, since most of the founders had retired or left the firms, there was no such a concern to save 'face' when remunerating and evaluating managers. For example, BJYD used a system of monthly penalties and yearly rewards for top managers, and monthly penalties and quarterly rewards for middle managers. Every year in BJYD, each of the vice general managers signed with the general manager a task agreement that specified business targets. These targets were divided monthly if they could be quantified. Based on the targets and task agreements, the year-end bonuses were determined. Similar agreements were also signed by middle managers with their superior. The fulfilment of targets by middle managers was reviewed once a month and bonuses were issued quarterly accordingly. If a middle manager failed to meet his targets, he was financially punished by deducting part of his monthly salary. The firm removed any vice general manager who failed to fulfil business targets for two consecutive years.

The punishment for bad performance in BJJH was just as strict. If a vice manager failed to meet the business targets for two consecutive quarters, his salary was reduced by one grade, for example from 6000 Yuan a month to 5000 Yuan. If he still failed to fulfil his targets by the end of the year, he was asked to resign.

7.5 Labour

7.5.1 Structure of the Workforce

As in most state-owned firms, contract employment was implemented in NJHQ from 1987, when the relevant government regulation was issued. However, it was not until 1995 that contract employment was applied to all of the firm's employees. Because all of the employees had worked in the firm for at least ten years, they were entitled and signed with the firm employment contracts with a non-fixed term. In order to reduce the burden on the firm of surplus labour, since 1995 about 200 workers had *xiagang* and, under a regulation issued by the Nanjing government, more than 200 of the employees were asked to retire before the official designated age. Even so, most of the remaining employees were redundant because the firm was undertaking little business.

The situation in the other four collectives studied, however, was different. The size of the workforce was determined mainly by the needs of the businesses and, therefore, there were scarcely any personnel surpluses. Compared with NJHQ, contract employment was used much later in these firms. After the Labour Law was put into effect in 1995, contractual employment was applied to all those who were categorised as 'formal' employees. In JSXK, the local employees who had been working for the firm for more than ten years could work on non-fixed-term contracts; while all of the other formal employees had to sign contracts with a fixed term - the fixed terms was five years for vice general managers and two years for others employees. In BJJH and BJYD at the time of the interviews there were no non-fixed contractual employees because of the high turnover of staff. The terms of contracts were relatively shorter: three years for top managers, two years for middle managers and one year for ordinary clerks. If the performance of any formal employees, or non-local contractual employees in the case of JSXK, were considered unsatisfactory, the firms laid them off, even when their employment contracts were still in effect.

In addition to the formal employees, the four firms also employed large numbers of temporary workers, who usually worked on production lines on a six-month basis and were paid by piece-rate. Temporary workers accounted for about a half of the total workforce in JSXK and in GZTP, more than one-third in BJJH, and four-fifths in BJYD. With such labour structures, the management could more easily increase the firm's workforce when production was busy and decrease it when business shrank. Furthermore, as reported by some of the managers interviewed, the extensive use of temporary labour served another purpose: it helped keep the workforces young so that working efficiency could be sustained.

7.5.2 Social Welfare Provisions to Employees

The social welfare burden on NJHQ was much heavier than on the other four collectives studied, especially before the social security reforms which began in the second half of the 1990s (see Chapter 2 for a discussion of social security reform in China). A whole set of social welfare provisions and facilities identical to those in state firms had been established in NJHQ before the mid 1990s. For example, it had two kindergartens and a health centre; these were removed in 1994 and 1997 respectively. Under a regulation of Nanjing city, the firm was required to pay tuition fees for the children of its employees until the children had finished junior high school. Before the pension insurance reform, which was part of the wider social security reforms, the firm had an obligation to issue pensions to the retired, whose number was equivalent to that of the in-post employees. Furthermore, at the time of the interview the firm was still obliged to cover 90% of the medical expenses of all of its employees, including retired workers; although the refund of the expenses by the firm was, in practice, always delayed.

By contrast, social welfare provided by the other four firms studied was simple in composition and more limited in coverage. This is because that the firms had to pay for these services from their revenues. Usually these services only applied to the formal employees. All the four firms covered part, ranging from 50% to 80%, of the medical expenses of those employees who worked on employment contracts with a term of more than three years. In BJJH and JSXK, those formal employees who were employed on a basis of three years or more were also entitled to the firm's pension package. After the government's social security reforms in the late 1990s, standard social welfare schemes, namely a pool of fund for housing, pension insurance and unemployment insurance, were implemented in these collectives.

7.6 Conclusions

In this chapter the results of the interviews with five collectives have been reported. The case studies suggest that collective firms in China can be different from each other in terms of their institutional environment and behaviour pattern. There are firms like NJHQ that have been embedded in the central planning system since birth and enterprises like the other four collectives studied in this chapter, which always depended on the market for survival. The distinction in behaviour patterns between NJHQ and the other four collectives, and the similarity of NJHQ to the traditional SOEs discussed in the previous chapter, seems to have resulted from the nature of the institutional arrangements under which the firms operated.

As a composite unit of the centrally planned economy of China, in the pre-reform era NJHQ received production quotas and subsidies from the superior government authority and then sold all finished products to the state. After the economic reforms began, the dependence of the firm on government agencies remained heavy. It used the superior authority as a facilitator for bank loans and channelled finished products through the state-owned commercial network, which was itself protected by the government from market competition. The lack of exposure to market competition led to the collapse of NJHQ's business in the 1990s, when the commercial network was dismantled and soft bank loans were withdrawn.

Direct financial support from government agencies to NJHQ may have been less extensive in the 1990s; but other aspects of the paternalistic relationship between superior authority and the firm remained substantial. The government authority set objectives for the firm and required it to remain in existence for the sake of social stability. In order to help the firm out of financial difficulty, the government authority facilitated the co-operation of the firm with a Taiwanese business for the production of pagers and, more recently, initiated the firm's shift from production to property management. In such an institutional environment, it is not surprising that within NJHQ the management were ineffective and the organisational structure was not designed to meet business requirements. With little business, NJHQ was trapped in a state of paralysis.

Standing in sharp contrast to NJHQ and the three SOEs studied in Chapter 6, the other four collectives reviewed in this chapter seem to have behaved more like market players. From the very beginning the firms depended on producing sellable products for their survival and relied on internal accumulation of capital for investment. In order to achieve this, the management tried to differentiate their products through efforts either in R&D or marketing, or in both. Unlike NJHQ and the traditional SOEs, which were hungry for soft bank loans, the senior management of the four collectives took a more cautious approach towards investment projects. This was because they bore all the consequences of their investment decisions.

With an arm's length relationship to government agencies, the senior management of the four collectives enjoyed much more freedom in business affairs. They could appoint their managers and decide the direction of the firm's strategic development and objectives, which were usually much more commercially oriented than those of both the traditional SOEs studied and NJHQ. In addition, the management of the four collectives were free to decide and change the firm's organisational structure according to the needs of business. The result was a structure that was slimmer than that found in the SOEs studied and NJHQ. Furthermore, the workforces in the four collectives were much more flexible, which involved an extensive use of temporary labour that could be easily adjusted according to market signals.

Internally, the senior management of the four collectives (BJYD, BJJH, JSXK and GZTP) tailored their incentive and control mechanisms to ensure the well being of the businesses, although the exact practices were different. Business targets were monitored through much more frequent plan reviews; managers' remuneration was closely connected to either the results of individual performance evaluation or the business performance of the firm, or both. In order to provide incentives for desired performance, in the four collectives business-related criteria were used to evaluate the work of the managers on a frequent and regular basis. The results of the evaluation were taken seriously in regard not only to rewarding but, especially, to punishing employees.

In summary, four of the collectives reviewed here were independent business entities and this contrasts with the traditional SOEs studied in Chapter 6 and the fifth collective, NJHQ, which had its roots firmly in the Chinese planning system. For the former group of firms, the market was the ultimate evaluator of their performance and their performance in the market determined their existence. As a result, market mechanisms were used to organise the firms' activities. All of these features were, however, absent in NJHQ and the three traditional SOEs. Under soft-budget constraints and frequent administrative intervention, these firms failed to develop their market sensitivity and were much less able to face up to increasingly fierce competition when it occurred in the 1990s. In spite of the introduction of market elements into the macro-economic environment of China, they continued to behave bureaucratically.

8. Case studies III: joint ventures

In the last chapter the results of interviews with senior management in five collective firms were discussed, to form a comparison with the results of interviews with managers in the traditional SOEs reported in chapter 6. The variation in behaviour among the collectives and the general difference between the state firms and the non-state ones suggest an important role for the institutional environment in shaping the behaviour of firms. In this chapter four joint ventures are studied to provide further comparisons to the state firms. These joint ventures are: Beijing JVC Industry Ltd. (BJJVC), located in Shunyi County, Beijing; Tianjin Samsung Electronics Co. Ltd. (TJSS) in Tanggu District, Tianjin; Tianjin Great Wall (Group) Co. Ltd (TJGW) in Tianjin city; and Shanghai Kenwood Electronics Co. Ltd. (SHKW) in Songjiang County, Shanghai. All of these ventures were established in the 1990s and are therefore much younger than the traditional SOEs and most of the collectives studied.

The arrangement of the text in this chapter is similar to that of the last two. An overview of the firms' histories is presented to give a general picture of their development. After that, the firms' external relations are discussed, with the intention of exploring the nature of the institutional environment in which the firms operate. Next comes a discussion of a variety of internal management issues, namely the internal structure of the firms, the appointment and remuneration of managers and employment practices. Through addressing these issues, the objective is to provide a fuller insight into how the firms organise their activities to serve their business needs. Finally, conclusions are drawn. The main source of the materials on which these case studies are based is, as before, interviews with the firms' senior managers. In addition, internal documents of some of the firms and *The Yearbook of the Chinese Electronics Industry* were used to triangulate the data.

Generally speaking, the case studies confirmed the findings of the questionnaire survey reported in Chapter 5, that joint ventures were more market-oriented in their behaviour than the traditional SOEs studied. However, there was a difference in the degree of commercialization, not only between the joint ventures studied but between the different development stages within a single firm. The structure of the equity of the joint ventures seems to have played an important role in determining the extent of their market-oriented behaviour. BJJVC, SHKW and TJSS, the three firms in which foreign partners held at least half of the equity, seemed to be more distanced from the behaviour of the traditional SEOs studied in Chapter 6 than TJGW - a joint venture controlled by a Chinese partner. This discrepancy increased when TJGW suffered both from changes in its foreign partners and from business deterioration in the second half of the 1990s. When the Chinese partner of TJGW increased its share of the firm's equity and consequently controlled the joint venture, old habits associated with traditional SOEs were restored and government intervention increased. In fact, at the time of the interview, TJGW, as detailed below, was almost undistinguishable from the SOEs in Chapter 6 in terms of behaviour. By contrast, in TJSS, the other firm that experienced changes in equity structure, things seem to have developed in the opposite direction. As the Korean partner increased its equity holding, the firm seems to have moved further away from administrative interference from Chinese government agencies and increasingly operated in a more business-oriented manner. The change in behaviour, along with the changes in equity structure, suggests that the relative strength of the partners in terms of equity holding plays a role in determining whether joint venture firms operate more or less like state firms.

8.1 Overview

Some general information on the joint ventures interviewed is given in Table 8.1. Of the four firms, BJJVC and SHKW had a constant equity structure throughout their history, while TJSS and TJGW experienced changes in the proportion of equity held by partners. Such changes were most dramatic in TJGW, where were changes in the equity structure and changes in the foreign partners. These changes seem to have had a major impact on the development of the firm.

Table 8.1 Background Information on the Four Joint Ventures

Firm	Main products	Number of employees	Structure of equity
TJSS	Video cassette players (VCRs) (1993 onwards)	Less than 800 (1993) More than 700 (1998)- about 400 temporary and more than 300 contractual.	*1993-1998: The 712 Factory (50%) and Samsung (50%) *1998-1999: The 712 Factory (20%) and Samsung (80%) *1999 onwards: The 712 Factory (9.7%) and Samsung (90.3%)
SHKW	Speaker systems and home theatre systems (1995 onwards)	About 400 (1994) More than 500 (1999)	1994 onwards: Kenwood (60%), SHBT* (25%), and a consultancy in Hong Kong (15%)
BJJVC	Video cameras (1993-1995; 1998 onwards) VCRs (1995 onwards)	About 70 (1993) More than 500 (1995) About 1000 (1999)	1993 onwards: JVC (50%), BJTE* and BJIC* (50%)
TJGW	Colour TV sets (1993 onwards)	About 2500 (1993) More than 1500 (1999)	*1993-1995 (the old TJGW) Tianjin GW Company (49%) and Konghua Group (51%) *1996-1998 (GW Yajia) Tianjin GW Company (75%) and Yajia Group (25%) *1998 onwards (the new TJGW) Tianjin GW Company (75%) and Yajia Group (25%)

* SHBT stands for the Shanghai Broadcasting and TV Group; BJTE refers to the Beijing TV Equipment Factory; and BJIC is abbreviations of the Beijing Investment Corporation.

8.1.1 Tianjin Samsung Electronics Co. Ltd. (TJSS)

This joint venture was set up in 1993, but the story behind its establishment can be traced back to much earlier. The Chinese partner of the joint venture was the State-owned 712 Factory, which used to be a military telecom producer and in the early 1980s shifted to consumer electronics production. Reporting directly to the Chinese Electronics Industry (CEI) Ministry before the early 1990s, the state firm was one of the few electronics producers in China that received financial support directly from central government. As one of the key state-owned electronics firms in China, the 712 Factory used large amounts of government subsidies to build production capacity for cassette recorders and TV sets. In the late 1980s, when market demand in China for video cassette recorders (VCRs) increased, the state firm became one of the thirteen government-licensed VCR manufacturers. With bank loans of US$ 8 million, facilitated by the Electronics Industry Ministry, in 1991 the factory bought from Sharp in Japan production equipment for VCRs.

However, immediately after the introduction of this new technology, the Chinese government tightened its control over VCR production by reducing the number of licensed firms from thirteen to four. The 712 Factory was one of the firms that lost out. As a result, the imported equipment was set aside and the firm faced capital difficulties caused by the bank loans taken for the technology transfer. There is always room for manipulation in China, however. After lobbying by the Tianjin municipal government, the National Trade and Economic Commission of China issued approval for the firm to carry on VCR production.[6] In order to tackle shortages of capital, the firm formed a joint venture with the Korean company, Samsung.

The joint venture was established in 1993 with each of the partners holding 50% of the equity. The equipment bought from Sharp was transferred to the new venture and formed the major part of the equity held by the Chinese partner. As a condition of accepting the equipment, the Korean partner required that, with the exception of major technical and management posts that were occupied by former employees of the 712 Factory, all the other posts in the joint venture should be occupied through public recruitment. The result was that by the end of 1993 there were just under 800 employees on non-temporary contracts in the firm.

VCR production began in TJSS in 1994. Because the price of VCRs in China at that time was high and market demand was huge, the joint venture sold more than 70% of its output in China, instead of 30% as required by the Chinese government. High economic returns continued until 1996, when visual compact disc players (VCDs) appeared in China. The market demand for VCRs consequently plummeted and the single-set price fell sharply, from several thousand to several hundred Yuan. In the face of a shrinking business, conflicts appeared between the two partners. The Koreans wanted to lay off most of the employees; while the Chinese partner rejected this proposal for the sake of social stability. In order to tackle this problem and pull the firm's business back on track, the Korean partner put forward a proposal to buy another 30% of the venture's equity from the 712 Factory. It imposed pressure on the Tianjin government to agree to this change by declaring that a condition for increasing its capital investment in other electronics firms in Tianjin was the control over TJSS and another joint venture with the 712 Factory. In 1998, the 712 Factory handed over 30% of its equity to the Koreans. After about four months of internal restructuring, the joint venture's board of directors, which was now dominated by the Koreans, announced a strategic shift from the Chinese domestic market to the overseas market. In addition, exempt from non-business-related intervention from the Chinese partner, the Korean partner laid off about 50 Chinese employees and converted about a half of the remaining employees into temporary workers.

Production was resumed at the end of 1998 and from then on all the finished products were sold in the overseas market. The business results in 1999 were good. With the marketing efforts of the Korean partner, TJSS produced and sold 1.6 million VCR sets. The sales success in 1999 brought in sales revenues of about one billion Yuan and profits of just under 50 million Yuan, making up for the losses in the previous years.

To further control the joint venture and push the business further away from the influence of both the Chinese partner and Chinese government agencies, in late 1999 the Korean partner increased its investment in the venture by US$ 25.8 million by buying another 10.3% of the equity.

8.1.2 Shanghai Kenwood Electronics Co. Ltd. (SHKW)

This joint venture was established in Shanghai in 1994, to produce audio products. The Chinese partner was the Shanghai Broadcasting and TV Group (SHBT), a holding company transformed from the Shanghai Electronics Industry Bureau in the early 1990s and currently in charge of all the SOEs and joint ventures in Shanghai that made broadcasting- and TV-related products. With the assistance of a consultancy in Hong Kong, SHBT established SHKW with the Japanese company Kenwood. With a total investment of US$29.8 million, 65% of it from the Japanese partner, 25% from SHBT and 10% from the consultancy, production equipment was bought and factory buildings were built in Songjiang county, Shanghai. Some

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[6] The number of VCR producers in China increased again in the second half of the 1990s, but most of

technical and management staff from CR and radio firms subordinate to SHBT were transferred to the joint venture. In addition, the joint venture recruited additional 400 employees, most of them as workers on the shop floor.

Production began in 1995 and sales revenues in that year were 100 million Yuan, with 80% coming from the overseas market and 20% from the Chinese domestic market. Business grew steadily afterwards until 1998, when the management of the joint venture made a decision to increase the share of revenues from the domestic market. This decision turned out to be an inappropriate one because the prices of the firm's products were too high for ordinary Chinese consumers. In the light of this mistake, the Japanese CEO left the firm and the sales were focused back on the overseas market. In 1999, 93% of the firm's output was sold overseas, 13% higher than stated in the original feasibility report for the joint venture. With sales successes in the international market, the business of SHKW rose again; in 1999 sales revenues reached 500 million Yuan.

8.1.3 Beijing JVC Industrial Ltd. (BJJVC)

This firm was established in 1993 to produce video cameras (VCs), a consumer electronic product encouraged and supported by the Chinese government at that time. One of the Chinese partners was the SOE called 'BJTE', which was reviewed in Chapter 6. After it obtained a licence for producing VCs from the government, BJTE cooperated with the Beijing Investment Corporation (BJIC), a half-business and half-government organisation, to establish a joint venture with the Japanese company JVC. The original investment was US$32 million, half coming from the Japanese partner and half from the Chinese partners. Most of the investment by BJTE was financed by bank loans, which were facilitated both by the Chinese Electronics Industry Ministry and by the other Chinese partner, BJIC.

After the establishment of the joint venture, about 50 technical and management staff were transferred from BJTE. However, the joint venture did not develop any further because the Chinese domestic market demand for VCs was not as large as expected. In addition, in order to encourage local production, the government did not, as

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them are in the form of joint ventures and are targeted on the overseas market.

specified in the original feasibility report, impose preferential tariffs on components imported by the joint venture. This made the prices of the firm's products uncompetitively high. This situation lasted until 1995 when the three partners decided to make an active change in strategy. The decision was to drop the VC production and, instead, to produce VCRs. With approval from the Beijing Electronics Industry Office, the higher authority of the Chinese partners, BJJVC began VCR production in July 1995.[7] In order to support the shift in product, the three partners invested another US$ 16 million in the venture, this time too, with half coming from the Japanese partner and half from the Chinese partners. At the same time, the joint venture accepted another 50 employees from BJTE and recruited about 400 new workers.

Output of the venture in 1995 was 160,000 sets, the bulk of which were sold in China. In 1996, when the demand for VCRs in the domestic market shrank, about one third of that year's output, namely 320,000 sets, were stock piled. In the face of the declining demand in the domestic market, the firm's board of directors decided to increase the proportion of products exported and transformed the firm into a production base for the Japanese partner. Thanks to the Japanese partner's marketing efforts, sales of the joint venture increased again. Not only were the stock-piled products sold, but the production volume increased to 830,000 sets in 1998 and to 930,000 in 1999. Alongside the expansion in output, the number of employees increased to about 1000.

Because of the two rounds of business downturn suffered by the joint venture, the return on investment was not as good as expected. At the time of the interview, it seemed unlikely that the firm would meet the aim of the Chinese partners to recoup their investment in eight years, as specified in the original feasibility report. The lower return than expected was one of the causes of the financial difficulty faced by BJTE, described in chapter 6.

8.1.4 Tianjin Great Wall Electronics (Group) Co. Ltd (TJGW)

[7] As in the case of TJSS, official approval from central government was issued after lobbying by the Beijing municipal government, although in principle the Chinese government controlled the number of VCR producers.

Different from the three joint ventures reviewed above, TJGW was a joint venture established on the basis of a Chinese SOE. This SOE was set up in 1982 by merging two state-owned producers of B&W TV sets. The new state-owned firm absorbed all of the 2500 employees of the two firms and was renamed Tianjin TV Set Factory. In 1984 the firm obtained a licence from government to produce colour TV sets. Under an arrangement of the local government, the firm acquired a paper producer in order to use the latter's land to expand output. With bank loans of more than 80 million Yuan, in 1987 the TV manufacturer constructed colour-TV factory buildings and introduced two production lines from Toshiba in Japan. In 1988 the firm was renamed Tianjin Great Wall Electronics Company. Like most TV producers at that time in China, the state firm enjoyed high profits. However, the situation changed after 1989 when the state-owned distribution network suffered from acute capital shortages (the state-owned distribution network and its financial crisis in the late 1980s were described in Chapter 7, in the discussion of NJHQ). Payments for the firm's products could not be collected in time from state retail outlets, and the enterprise's monthly sales revenues consequently dropped sharply, from 40-50 million to seven million Yuan.

In 1993, through the Tianjin municipal government as intermediary, the state firm signed a contract with a Hong Kong TV-set producer, Konghua Group, to build a joint venture. As required by the Tianjin government during the negotiation, all of the 2500 employees in the colour TV division of the state firm were transferred to the new venture. Taking the production lines, the factory buildings and other equipment owned by the Chinese partner as the total capital of the joint venture, Konghua Group paid the state-owned firm 47.88 million Yuan to buy 51% of the joint venture's equity. In order to distinguish the new business from the state-owned firm, the joint venture was named Tianjin Great Wall Electronics (Group) Co. Ltd (TJGW).

Along with the capital from the Hong Kong Partner, the joint venture also received product designs which were developed at the Hong Kong headquarters. These designs were much more sophisticated than those of the Chinese partner. Furthermore, holding the majority of the equity, the Hong Kong partner filled most of the important management posts and consequently managed the venture in its own manner. Office areas were re-arranged, responsibilities and authority for each post were clearly defined, and business targets were closely monitored. With more advanced products and better management, there were signs of business improvement during 1993 and 1995; at that time the average annual profit was more than 20 million Yuan.

This good time did not last for long, however. In 1995, Konghua Group was taken over by a Japanese financial institution, Yajia Group. Consequently, the equity of TJGW held by the Hong Kong partner was transferred to Yajia Group and the managers from Hong Kong were replaced by Japanese expatriates from Yajia. Unlike Konghua Group, the Japanese partner knew little about how to operate industrial firms and the management of TJGW began to deteriorate. Furthermore, with large amounts of bank loans due for repayment (which had been taken as working capital), unpaid commission for technology transferred from Konghua Group and payments due for components bought from the Hong Kong company, TJGW was in financial difficulty.

In fear of the imminent displacement of the 2500 employees in TJGW, after negotiating with Yajia Group, the Chinese partner and the Tianjing Government decided to abandon TJGW and establish another joint venture, named Tianjin Great wall Yajia Group (GW Yajia). The new venture, 75% of whose equity was held by the Chinese partner, did not bear debts from TJGW but accepted all of the 2500 employees and the production equipment. However, because of the withdrawal of Konghua Group, the main provider of product designs and the main marketing organiser, the new venture could not stop its business from continuing to decline in the face of an increasingly competitive market for colour TV sets in China.

In 1998, the Tianjin government negotiated with Fude Group in Japan, the parent company of Yajia Group, to set up a joint venture producing TV sets in Wuqin County, Tianjin. By providing the equipment and capital for constructing factory buildings, Fude Group held 75% of the new venture's equity, while the Chinese partner of GW Yajia, as the provider of the land, held the other 25%. Five hundred employees of GW Yajia were transferred to the new firm. However, these workers were used to manual production lines and could not properly operate the new equipment with its high level of automation. The products of the new firm did not succeed in the market and, at the end of 1998, this joint venture stopped almost all of its operations.

Also in 1998, the Chinese partner of GW Yajia decided to abandon GW Yajia because of an unstoppable decline in business. It set up, again, a new joint venture. This new venture, still with Yajia Group, restored the name TJGW (in order to distinguish, the new venture will be called 'new TJGW' in the following text). Although the name was the same, this TJGW had no legal connection with the old TJGW. In order to avoid the government's restriction on establishing new TV firms, the new TJGW was registered as an air-conditioner producer; but, in reality, colour TVs were still its main product. Controlling 75% of the new firm's equity, the Chinese partner transferred to the new TJGW most of the employees and all the production facilities of GW Yajia. The 500 employees who were transferred to the joint venture in Wuqin County were also absorbed by the new TJGW. However, like its predecessors, the new TJGW still suffered from capital shortages. In China, it is not easy for joint ventures, especially those with poor performance, to obtain long-term bank loans. In order to get easier access to such loans, the Chinese partner decided, in effect, to put together its state-owned business and its joint venture business by using the same management for the two firms. The hope was to enjoy access to the privileged status of state firms when applying for bank loans. However, with the state-owned part of the business having a continuing bad credit status, caused by large amounts of unpaid bank loans, such a hope seemed weak unless the firm could get its project registered in the government's investment plans.

8.2 External Relations

8.2.1 Relations with Government Agencies

The four joint ventures studied were connected with Chinese government agencies through their Chinese partners, which in the four cases were all state firms. But the relationship was looser in the joint ventures than in the SOEs studied in Chapter 6. Extensive government intervention usually occurred during the negotiations before the establishment of the joint ventures or when there were strategic changes, such as changes in equity structure and in main products. Like the traditional SOEs discussed in chapter 6, the state-owned Chinese partners could not make important investment decisions without the involvement of higher government authorities. Negotiations with the foreign partners were conducted with the attendance of representatives from the government, who were actually the final decision makers. This was most obvious in the cases of TJSS and TJGW. In TJSS, the Tianjin government played a vital role in finding the Korean partner, after the ending of the technology-transfer project with Sharp. When the Korean partner wanted to increase its share in the joint venture's equity, it was the Tianjin government that asked the 712 Factory to accept the deal. In the case of TJGW, the marriage of Tianjin GW Electronics Company to Konghua Group was facilitated by the Tianjin government, in an effort to help the SOE. Without approval and encouragement from the Tianjin government, it would have been impossible for GW Yajia to be set up after abandoning the old TJGW, for the new TJGW to be established after setting aside GW Yajia, and for the management of the new TJGW and of the state-owned Tianjing GW Electronics Company to be integrated. This kind of government involvement also occurred in BJJVC, but to a lesser extent. Before the establishment of BJJVC, one of its Chinese partners, BJTE, had to get a licence from the government for VC production. When the joint venture wanted to shift to VCR production, advance approval from the local government had to be secured.

Another area where heavy government involvement occurred was in the appointment of Chinese CEOs/vice CEOs and directors to the boards. Usually, the Chinese top managers in the joint ventures were nominated by the Chinese partners, but approval from higher authorities had to be secured before actual appointments were made. In addition, the Chinese CEOs/vice CEOs, like their counterparts in SOEs, were evaluated once a year as Party cadres by government agencies.

It might be expected that government interference in operational affairs would be less in joint ventures than in SOEs (Forrester and Porter, 1999), but research into the four joint ventures suggested that the degree of intervention varied from one firm to another and within a single joint venture when the structure of the equity ownership changed. In TJSS, when each of the two partners held a half of the equity, the Tianjin government could influence the firm through the presence of the 712 Factory in the joint venture. In 1997, when TJSS faced financial difficulty due to the shrinking of the domestic market for VCRs, the Tianjin government opposed the proposal by the Korean partner to reduce the workforce, so as to maintain employment and social stability. The conflict was resolved after the Korean partner took control of the majority of the equity. Subsequently, about 50 employees were laid off and the workforce was restructured by enlarging the proportion of temporary workers. When the Korean partner increased its share of the equity further, to about 91%, it was clearly stated in the contract that the Chinese partner, and in turn Chinese government agencies, would have no further say in the business affairs of TJSS.

By contrast, TJGW suffered increased government interference when the equity structure and the foreign partner changed, representing a reverse of the example of TJSS. When Konghua Group held 51% of the firm's equity, it made most business decisions, which were usually commercially related, as commented by the manager interviewed. Nevertheless, the Chinese partner still had some influence. Required and encouraged by the local government, the Chinese partner insisted on transferring 2500 employees from the state-owned firm, even at the price of small and rare salary increases among the employees and Chinese managers. The concern to maintain employment and therefore social stability was more obvious when the Chinese partner gained control over GW Yajia and later the new TJGW. Under the requirement of the local government to give priority to maintaining social stability, the management of the new TJGW not only absorbed all of the employees from the abandoned GW Yajia, but accepted the 500 employees who were transferred to the joint venture in Wuqin County. Moreover, the local electronics bureau required the management of the new TJGW to submit business plans and then assigned business targets to the management. However, it seems that the bureau took no action against the management of the firm when they failed to fulfill the targets.

The relationship of BJJVC and SHKW with government agencies fell in between those of TJSS and the new TJGW. Although the local electronics bureau did not intervene in the business affairs of BJJVC, it required to be informed about the firm's business performance. In the case of SHKW, the higher government authority, which was at the same time the Chinese investor, appointed the Chinese vice CEO, even though it only held 25% of the equity. Apart from that, the Chinese partner did not interfere in the operations of the joint venture, provided it could get a high enough return on its investment.

In addition, there is a further observation on the relationship between joint ventures and government agencies that arose from my study and is evidenced in other studies (for example, Ma, 1997; Granick, 1990), namely conflicts and discrepancy in the interests of central government and local government. In the cases of both TJSS and BJJVC, for instance, when the central government placed a restriction on the number of VCR producers, the local governments still found a way to get their projects approved, in support of local interests. Also, in the case of TJGW, although the central government forbade any increase in the number of TV producers, GW Yajia and the new TJGW still were set up. In order to avoid the restriction set by the central government, the new TJGW was registered as an air-conditioner producer, with the authority of the local government.

8.2.2 Relations with Banks

It was reported by the managers interviewed that most of the investment in BJJVC, SHKW and TJSS by their Chinese partners was financed by bank loans. The procedure for applying a bank loan was very tedious. At first, the Chinese partners had to secure a licence from the Electronics Industry Ministry to produce the intended products. With the licence, they had to submit an application for bank loans to the local electronics bureau. After being passed to the local trade and economic commission, the application was handed on to the National Economic and Trade Commission for a final decision. After all the bureaucratic institutions had offered approval, local branches of the Industry and Commercial Bank of China issued loans to the state-owned partners, who then put the loans into the joint ventures as their shares in the equity. Since it was the Chinese partners that took the bank loans, it was they that took the responsibility for repaying the loans. In 1997, for example, the 712 Factory faced pressure from the banks when TJSS suffered from a sharp decline in domestic demand for VCRs. BJJVC is another example; because demand in the Chinese domestic market for both VCs and VCRs was lower than expected, it was unlikely that one of the Chinese partners, BJTE, would be able to obtain enough return on its investment in the joint venture to repay its bank loans on time. This increased the amount of unpaid bank loans in the state-owned firm (the financial distress faced by BJTE was reported in Chapter 6). It seems that this kind of relationship between the joint ventures, the banks and the Chinese partners provided incentives for Chinese investors to take the businesses of the joint ventures seriously. However, it also appears that this kind of incentive was limited by the 'soft' financing relationship between SOEs, state-owned banks and the government, which was described in Chapter 6. As shown in the case of BJTE (in Chapter 6), there was no 'hard' action taken by either banks or government against the failure of Chinese partners to repay loans.

It was usually difficult for the joint ventures studied here to obtain bank loans to expand fixed assets. As a result, they usually used profit retentions to buy new machinery and office equipment. However, all of the joint ventures interviewed took short-term bank loans for working capital. It seems that access to this kind of loan was determined mainly by their historical credit record. It appears that BJJVC, SHKW and TJSS had no difficulty in repaying short-term loans. A similar situation also existed in the old TJGW before 1995; but when the firm's business began to deteriorate after 1995, it could only obtain loans through the facility of the local government. When unpaid bank loans piled up, in 1996 the Chinese partner and its superior authority abandoned the joint venture and set up a new one. This very tactic was used again two years later, during the closure of Tianjin Yajia and the establishment of the new TJGW. In spite of continued misery in the business, the new TJGW still managed to get bank loans in 1998. These loans soon came due for repayment. With accumulated debts, the firm now found the door to further bank credits closed. It was this increasing difficulty in obtaining bank loans that led the Chinese partner to decide to use the same management for both the joint venture and its state-owned firm. It hoped to raise capital for the former in the name of the latter; in other words, 'soft' financing would be channeled through the SOE to the joint venture.

8.2.3 Relations with the Market

Much of the credit for the good sales records enjoyed by BJJVC, SHKW, TJSS and the old TJGW in its prosperous times should go to the marketing activities of the foreign partners. Marketing activities and core product development were all conducted at the headquarters of the foreign partners. This explains the absence of formal marketing and R&D facilities in the joint ventures studied. Fortunately, the foreign partners seemed good at these activities and the joint ventures were consequently able to concentrate on production. However, it was this kind of dependence on foreign partners that undermined the old TJGW's own abilities to market products and to undertake product development. There was no need for the firm to pay attention to the 'painful' process of product development because the Hong Kong partner brought into the joint venture advanced products. When this partner was in trouble and later when it was time for the Chinese partner to run the firm - GW Yajia and later on the new TJGW - the Chinese partner's inability in both marketing and R&D handicapped business recovery.

8.2.4 Sub-summary

Generally speaking, the joint ventures discussed here operated more like business entities than the traditional SOEs studied in Chapter 6. They were free to make most of their business decisions and their access to bank credit was largely based on their previous record of repaying loans. However, there was government intervention, especially when there was trouble in the business, with the Chinese partners as an intermediary. Since the Chinese partners were state firms that could not make important business decisions without the endorsement of their superior authorities, government intervention occurred, in particular when there was a need for the joint ventures to make a strategic shift. The degree of influence from government agencies varied according to the structure of the joint ventures' equity. The lower the share of the Chinese partners in the equity, the less administrative intervention and the more business-oriented the decisions made by the management. When the Chinese partners took control of the majority of the equity, as happened in GW Yajia and the new TJGW, the joint venture tended to be managed in a way similar to that of the traditional SOEs studied. That is to say, without a check from foreign partners, a paternalistic relationship between government agencies and state firms was imposed on the joint venture. The habits and mental attitudes of state firms were then introduced into the joint venture.

8.3 Internal Structure

All of the joint ventures studied had boards of directors. Broadly speaking, the composition of the boards represented the shares in the equity held by the partners; so did the composition of top management. Chinese directors were usually appointed by the higher authority of the Chinese partners. Most of them were general managers or Party secretaries of the state firms that had invested in the joint ventures. In the case of the new TJGW, an official from the local government chaired the board. It seems that it was through the presence of these Party cadres at board and top management levels in the joint ventures that the government authorities exercised their influence on the firms. This is one of the reasons why the less the equity held by the Chinese partner, the more the joint ventures were immune from administrative interventions.

The structure of the equity also had an impact on the organisational structure of the joint ventures studied. The way the firms were organised reflected the features of the partner that controlled the majority of the equity. In BJJVC and in TJSS before 1998, where the equity structure was 50% and 50%, the firms were structured in a manner similar to the Chinese partners, but with fewer departments. When the Korean partner controlled TJSS, the firm was structured in a style used by the partner. That is, formal departments were regrouped into two teams, namely the management team and the production team. Under each team there were staff in charge of particular functions. Similarly, in the Japanese controlled SHKW, functional units were organised in a way similar to the Japanese partner. There were three divisions in charge of production, general management and sales respectively. Under each division were functional departments. Common to the three joint ventures was a slim functional structure but a large production section. This occurred because the joint ventures were production bases for the foreign partners. To exercise further control over the operations of the joint ventures, the production unit and the financial department in these firms were always headed by managers from the foreign partners.

The organisational structure of TJGW was, however, much more burdensome compared with the other three firms. In the old TJGW, where the Hong Kong partner took control, the organisational structure was slimmer than in the two Chinese controlled joint ventures, namely GW Yajia and the new TJGW. It seems that this was because the Hong Kong partner was more concerned about returns on its investments than the Chinese partner. Even so, the structure of the old TJGW was still overweight because it absorbed all of the employees from the colour-TV division of the state-owned firm. In GW Yajia, the earlier successor of the old TJGW, the organisational structure was the most cumbersome; there were more than twenty departments. It was reported by the manager interviewed that these departments, some of which were superfluous, were set up for two purposes, namely to settle as many employees in the new joint venture as possible and to correspond to the organisational structure of the local electronics bureau.

In all of the four joint ventures studied there was a lack of formal marketing and R&D. The lack of such functions in BJJVC, SHKW and TJSS was, as mentioned earlier, due to the fact that the bulk of their products were sold in the overseas market, where both R&D and marketing were organised by the foreign partners. The same also applied to the old TJGW, where the Hong Kong partner gave the firm sophisticated products and channeled most of the finished products overseas. It was this very process, however, that caused the weaknesses in the new TJGW in marketing and R&D. With the withdrawal of the Hong Kong partner, product designs and orders stopped flowing into the firm. In the face of financial difficulties, it was reported by the manager interviewed that the management of the new TJGW was reluctant and unable to invest in building its own marketing and R&D facilities.

Party organs were lightly represented in the joint ventures studied, especially in BJJVC, SHKW and TJSS. In each of the three firms there was only a part-time Party secretary, a post taken by the Chinese vice CEO. This was also true of the old TJGW. However, in GW Yajia and the new TJGW, a full-time Party secretary was employed along with another two full-time Party staff. Furthermore, all the traditional main Party functions within an enterprise, namely publicising, organisation and discipline, were established. The relatively heavier presence of the Party in the new TJGW may have provided an important avenue for imposing political objectives over business goals.

8.4 Management

8.4.1 Appointment, Performance Evaluation and Remuneration of Chinese Top Managers

The candidates for the Chinese CEO or vice CEO in the joint ventures studied were decided by the Chinese investors. In the cases of GW Yajia and the new TJGW, all of the Chinese senior managers were chosen and appointed by the local government, with 'political attitude' as one of the most important criteria. Despite the failure of the top management to boost the business, the CEO and vice CEOs of GW Yajia, all of whom originated from the state-owned Tianjin GW Electronics Company, took on the same posts in the new TJGW. It seems that this top management, inculcated in the management attitudes of traditional Chinese state firms, ran the joint venture in a similar way to a traditional SOE.

Although the Chinese CEOs/vice CEOs in TJSS, BJJVC and SHKW were evaluated once a year by local government as Party cadres, the interviews suggested that this kind of evaluation seems to have had no effect on these managers, in terms of reward and punishment. Within the firms the performance of top management was regularly and rigorously evaluated by the boards of directors against business targets set. A significant part of the top managers' incomes was in the form of bonuses that were linked to the performance of the firm. When the performance of the joint ventures was not as good as expected, as happened in BJJVC in 1995, SHKW in 1998 and TJSS in 1998, the foreign partners changed their senior expatriates. Under pressure from the foreign partners, the Chinese partners sometimes changed their representatives in the top management. For example, the Chinese vice CEO of BJJVC was dismissed in 1995 along with the Japanese CEO. However, it seems that the degree of the connection between personnel changes in Chinese top management and unsatisfactory performance of the firm varied according to the structure of the equity. For instance, the dismissal of the Japanese CEO in SHKW in 1998 was not accompanied by a removal of the Chinese vice CEO. The reason for this may lie in the fact that the more of the equity owned by the foreign partner, the less the responsibility for business performance taken by the Chinese top managers. This also applied to the relatively looser link between the Chinese vice CEO's bonuses and the firm's performance observed in TJSS, compared with the situation in SKKW and BJJVC.

Although the performance of Chinese top managers in the new TJGW was also evaluated by the board according to business plans, the higher government authority also took part. However, it seems that neither the board nor the authority took the business plans and the evaluations particularly seriously. The interview suggested that, as in the traditional SOEs studied in Chapter 6, performance evaluation for the top managers of the new TJGW was only a ritual procedure, which neither had an effect on the incomes of the managers nor played a determinant role in the managers' career. Even in the old TJGW during its prosperous times, the link between managerial compensation and the firm's performance was weak. In part this occurred because of a fear by the local government that the greater the income gap between top managers and ordinary employees, the bigger the risk of resentment among the employees.

8.4.2 Appointment, Performance Evaluation and Remuneration of Chinese Middle Managers

All of the four joint ventures studied could appoint their own middle managers. However, how these posts were filled was somewhat different and seemed related to the structure of the equity. The more of the equity held by the foreign partner, the more likely standardised recruitment procedures would be used in appointing middle managers. In the joint ventures with a 50%-and-50% equity structure, namely BJJVC and TJSS before 1998, the posts at middle-management level left to the Chinese partners were occupied by employees transferred from the state-owned firms, without intervention from the foreign partners. When the Korean partner increased its share of the equity in TJSS, however, Chinese incumbents in middle managerial posts were reassessed by the Korean top managers; although this led to no staff being removed. In SHKW, where the Japanese partner took control of the firm, the posts at the middle level left to the Chinese partner were not filled automatically by employees transferred from affiliates of the Chinese investor. Rather, top Japanese managers and the Chinese vice CEO interviewed the candidates recommended by the Chinese partner. If they passed this interview, they had to go through a three-month probation period before they were formally employed. In the old TJGW, practices were different from all of the above three. Since the whole colour-TV division of the Chinese partner was transferred to the joint venture, the middle Chinese managers were those who had held equivalent posts in the previous division. When GW Yajia was set up, these managers were transferred to the new venture. Again, when GW Yajia was abandoned, these middle managers were transferred to the equivalent posts in the new TJGW.

How middle Chinese managers were remunerated and how their performance was evaluated seemed also to be associated with the firm's equity structure. The loosest performance evaluation for middle managers was found in the new TJGW. In this case, there was no regular and serious performance evaluation for the middle management and responsibilities for each post were not clearly defined. The only performance evaluation conducted for middle managers in the new TJGW was one similar to that used in the traditional SOEs studied in Chapter 6. That is to say, the evaluation was designed more for the purpose of evaluating Party cadres than for evaluating the performance of individual managers against business targets. In the new TJGW, the nation-wide salary system used by most SOEs was applied to all of the Chinese employees. Monthly bonuses were issued to the employees as a fixed part of salary. A profit-linked year-end bonus arrangement, used in the old TJGW during its prosperous times, was abandoned in the new TJGW. As a result, it seems that the remuneration of employees in the new firm was connected neither with the firm's business performance nor with their individual performance.

In the other three joint ventures, the remuneration of the Chinese middle managers and of the other Chinese employees was designed to be linked to individual performance and the firm's business results. Bonuses were used in BJJVC and TJSS. Every month in BJJVC and every quarter in TJSS, the performance of the employees was evaluated by their immediate superior against targets assigned to them. The actual bonuses issued to them were worked out by deflating or inflating the normal amount specified in their salary packages according to the evaluation results. Although regular bonuses were not used in SHKW, there was a yearly salary review based on performance evaluation. In order to encourage the employees to improve their ability, both TJSS and SHKW included in their basic salaries allowances for educational attainment and skill certificates. In addition to using bonuses or salary reviews to reward good and to punish bad performances, middle managers could be removed. BJJVC, however, seems to have been more benevolent towards staff removed than the other two joint ventures. For example, there were three section managers in BJJVC who were thought not suitable for their managerial posts. But partly because they were all transferred from one of the Chinese partners, their salaries were still paid as section managers even though their managerial responsibilities were taken over by others.

8.5 Labour

Generally speaking, it seems that the joint ventures studied were inclined to use standardised employment practices, although they varied in detail. Employment contracts were used for all non-temporary employees from the establishment of the firms. Standardised social security practices were implemented much earlier in BJJVC, SHKW and TJSS than in TJGW (and the Chinese SOEs studied in Chapter 6). Social insurance was employed in the three joint ventures long before social security reform was introduced more generally in China; while social welfare provisions in TJGW were similar to that found in the state-owned firm of the Chinese partner.[8] The more standardised employment practices found in the joint ventures than in the other ownership types studied (see Chapters 6 and 7) may be due, as argued by some researchers (for example, Forrester and Porter, 1999; Warner, 1996), to pressure from the foreign partners. However, as shown below, the degree to which standardised employment practices were used differed across the firms studied here and seems to have been associated with the structure of the equity.

8.5.1 Structure of the Workforce

It seems that the flexibility of the workforce in the joint ventures studied was closely associated with the proportion of the equity held by the foreign partners. The most rigid workforce was observed in TJGW and the most business-related was found in TJSS after 1998. In both the old and the new TJGWs, about a half of the employees worked on contracts with a non-fixed term and the remaining half worked on a five-or three-year contract. There were no temporary workers because the firm already employed large numbers of superfluous contractual workers, which it was reluctant to lay off. This policy was driven by a desire to maintain social stability, as required by the local government.

Contractual employees with a non-fixed term also existed in BJJVC and SHKW, but to a much lesser extent. For example, about 10% of the employees in BJJVC and about 20 out of the 500 employees in SHKW were employed on such contracts. All of these employees were those who came from the Chinese partners when the joint ventures were established. For employees with a fixed contractual period, the terms used in SHKW were shorter than in BJJVC. In SHKW two-year contracts were used for managers and one-year contracts for ordinary employees. Before 1997 three- to five-year contracts were used for all of the recruits in BJJVC. After 1997, only managerial and technical elites were entitled to sign contracts with such terms; all of the other employees were employed on a one-year basis. In addition to the contractual employees, there was temporary labour in the two firms. More than 70 temporary workers were employed in SHKW, all on the shop floor, but only five in BJJVC, working as cleaners.

The most flexible workforce among the joint ventures studied existed in TJSS. Among the 800 employees or so, more than a half of them were temporary workers; the other half worked on fixed-term contracts. The initial contract term for recruited managers and technical staff was three years; but after these contracts expired, the renewed contracts were, like those used for ordinary employees, on a yearly basis.

Associated with the level of flexibility of the workforce was the level of labour redundancy in the firms. There were severe personnel surpluses in the new TJGW, especially among apprentices and support staff. However, in fear of potential social instability, the management did not streamline the firm's workforce. Redundancy also existed in BJJVC among support staff, but to a much lesser degree. In 1999, the firm laid off about 70 of its employees to reduce costs. Thanks to more flexible labour

[8] The social welfare provisions in TJGW's Chinese partner were similar to those of the traditional SOEs discussed in Chapter 6.

employed in TJSS and SHKW, there appeared to be no personnel surpluses in these two firms.

8.5.2 Renewal of Labour Contracts

With social stability as the primary objective of the new TJGW, it was reported by the manager interviewed that no labour contract due to expire failed to be renewed. By contrast, in the other three joint ventures studied, labour contracts were renewed in the light of the firm's business needs and the performance of the employees in question. The process was straightforward: decisions were made based on the results of individual performance evaluation, which were regularly conducted in the firms. The employment contracts of those who scored below a designated grade were terminated. In 1999, for example, BJJVC refused to renew labour contracts for about 30 employees. There were also 100 similar cases of the failure of contract renewal in TJSS after 1998.

8.6 Conclusions

In this chapter the results of interviews with four joint ventures were reported. As the case studies showed, with the involvement of foreign direct investment, as a whole the joint ventures studied showed more of the characteristics of a business entity than the traditional SOEs studied in Chapter 6. However, the situations in the four firms were, to some degree, different and closely associated with the balance of the equity held by the business partners. As Goodall and Warner (1997) point out, there is no conclusion that can be generalised to all joint ventures in China. Based on the data from the interviews, the four firms studied in this chapter can be arranged along a spectrum, as shown below in Figure 8.1. The new TJGW was the closest to the SOEs in terms of behaviour and management and employment practices and the TJSS after 1998 was the furthest away.

Figure 8.1 The Distance in Behaviour between the Joint Ventures and Their Partners

Chinese partners (SOEs)	The new TJGW	The old TJGW	TJSS before 1998 BJJVC	SHKW	TJSS after 1998	Foreign partners

The position of the firms on this spectrum reflects the structure of the equity. As discussed above, the more of the equity held by a non-state or foreign partner, the more its managerial and organisational characteristics showed through in the joint venture. For example, the organizational structure of the firms studied reflected that of the controlling partner. In particular, the new TJGW, dominated by a state-owned enterprise, was organised so that its departments corresponded with those of the higher government authority; while TJSS after 1998 and SHKW were structured in a way similar to that of their major foreign partners.

Similarly, the equity holdings of different partners seem to have determined the distance between the joint ventures and Chinese government agencies. With 75% of the equity held by the Chinese partner, the new TJGW had a heavy dependence on government authorities. It was the encouragement and support from the local government that gave birth to the new TJGW. With assistance from the same source, the new joint venture succeeded in avoiding the central government's restriction on TV-set producers, by registering as an air-conditioner producer. This observation echoes the finding of Pearson (1991, p.204) that local governments usually put local economic interests before national ones and sometimes even before the well-being of the joint venture. On the other side of the relationship with government authorities, the new TJGW suffered the most severe administrative intervention among the joint ventures studied. The superior authority set for the firm the primary objective of keeping social stability. It also required the board of directors, whose members were appointed by the authority, to submit the firm's business plans to it for approval. This political interference, as commented upon by Child (1996, pp. 244-245), was intended to promote the local government's political objectives.

At the other end of the spectrum, TJSS represented a totally different picture. Before the Korean partner controlled the majority of the equity, government agencies influenced the firm through their control of the Chinese partner. This was most obvious in 1997 when the joint venture faced business difficulties. However, like many other foreign businesses in China, the Korean partner invested heavily in political connections with various government agencies. It finally bought another 30% of the equity from the 712 Factory in 1998 so as to have a decisive say in the business of TJSS. When it increased its share of the equity again, in 1999, it appears that the joint venture moved its business further away from both the Chinese partner and Chinese government agencies.

It seems that the management and organisational practices employed by BJJVC, SHKW and TJSS were more effective in serving their business requirements. In the cases of the first three firms, the remuneration of employees was linked to individual performance. The three firms also had a slimmer and more business-related organisational structure than TJGW. Another area that seems to be connected with the equity structure was employment. The new TJGW had the most rigid labour structure and registered the most severe personnel surpluses among the joint ventures studied. By contrast, after 1998 TJSS employed the most flexible workforce. The proportion of temporary labour in TJSS was the largest among the four joint ventures. In addition, it had no non-fixed-term contractual employees and the contract terms for its employees were the shortest among the four firms. As a result of its flexible workforce, there were no labour surpluses in the firm. The employment practices used by BJJVC and SHKW fell in between those found in TJGW and TJSS.

The variation in behaviour observed among the joint ventures studied here was connected to their relations with each of the Chinese and foreign partners. Both the Chinese partner(s) and the foreign one(s) put investments into the joint ventures, in an expectation of drawing dividends and, if possible, to obtain returns exceeding their original investment. The more of the equity held by one partner, the more the commitment put into the joint venture by this partner, and the more the joint venture reflects this partner's characteristics. Generally speaking, one of the primary objectives for foreign businesses building joint ventures in China is to harvest as much return as possible (Daniels *et al.* 1985). This profit drive gives the joint venture the characteristics of a business unit, but the research reported here confirms that the degree is affected by the equity structure. In principle, a Chinese partner should show the same level of business concern because it also has put capital into the venture, most of which is usually in the form of bank loans. It too should expect to earn a return that enables it to at least repay the debts. However, in reality, the profit objective of the Chinese partner is lessened by the SOEs' own relationship with government agencies and with the state-owned banks. Soft budget constraints and the paternalistic relationship between the government and the SOEs (see Chapter 6) relieve pressure on SOEs that suffer from poor profits or losses. In rum, the SOEs therefore reduce their focus on profits when investing in joint ventures. The influence of the SOEs' less business-related behaviour on their joint ventures seems to be limited only by the stake of the foreign partner(s) in the joint ventures. The actual degree of profit-driven behaviour in the joint ventures is, therefore determined by the locus of control. The partner who dominates the joint venture's equity will usually control the firm and consequently will determine the extent to which the joint venture operates as a commercial entity.

9. Case studies IV: Corporatised SOEs

In the previous chapters traditional SOEs and non-state firms, namely collectives and joint ventures, were discussed. The case studies showed that the traditional SOEs were similar to each other in behaviour pattern, while there were behavioral variations among firms within each of the other two types of ownership form. Two of the non-state firms, namely NJHQ and the new TJGW, which had external relations akin to those of the traditional SOEs, tended to organise their structure and management in a similar way to state firms. By contrast, the other non-state firms, which depended mainly on the market for survival and development, ran their businesses more like normal market players. This suggests an important role for the external institutional environment in determining the behaviour of firms. In the traditional SOEs, and also in NJHQ and the new TJGW, it was a bureaucratic mechanism that was mainly used to coordinate the firms' activities.

According to the official definition of the Modern Enterprise System (MES), state firms are to be transformed into economic entities with clearly defined property rights and better corporate governance (see Chapter 2 for a more detailed discussion of the MES). That is to say, corporatised SOEs should operate under institutional arrangements different from those of non-corporatised ones and reflect the distinctive features of true business entities. In order to assess the effects on state firms of the Chinese economic reforms of the 1990s, especially the MES, five incorporated SOEs are studied in this chapter. The aim is to see whether these firms have become enterprises independent of government agencies, operating totally or largely according to market signals.

The corporations studied are: Beijing Peony Electronics Group Corporation (BJP), Shanghai Jinxing Electronics Ltd. (SHJX), Nanjing Audio Co., Ltd. (NJA), Nanjing Panda Electronics Group Co., Ltd. (NJP), and Qingdao Hisense Group Co., Ltd (QDH). Table 9.1 gives some background information on these corporations. Except NJA which produces audio products, all the other firms produce TV sets as their main product; although production diversification has occured in NJP and QDH and, to a lesser extent, in BJP. Generally speaking, the corporations are relatively larger in size than the traditional SOEs studied in Chapter 6. It also seems that most of them have more important positions than the non-reformed ones in the CEI, in terms of support and attention from the government. Perhaps it is for these reasons that these firms were chosen by the government for the MES. The forms of corporation adopted by the firms are different and were usually decided by the government. BJP and QDH were transformed into group corporations, wholly owned by the state. NJP was first corporatised in the same way but, in 1999, became a corporation with multiple investors; although all the investors remained state-owned. SHJX was transformed into an affiliate of the Shanghai Broadcasting and TV Co. Ltd. (SHBT), which was the former government authority to which the firm reported. NJA was reformed into a joint stock company. In addition, NJP and QDH each has an affiliate, listed joint stock company.

Table 8.1 Background Information on the Corporatised SOEs

Firm	Main products	Firm size*	Number of employees	Form of corporatisation
BJP	B&W TV sets (1973-1979) Colour TV sets (1979 onwards) Environment-related products (1997)	Large	Over 200 (1973) More than 4000 (1999)	Wholly state-owned limited liability company (1994)
NJA	Loudspeakers (1953 onwards) Speaker systems (1987 onwards)	Medium	Less than 150 (1958) More than 1200 (1999)	Unlisted joint stock company (1995): state shares (56%), collective shares (24%) employee shares (20%)
SHJX	B&W TV sets (1969-1993) Colour TV sets (1980 onwards)	Large	About 200 (1970) About 5000 (1992) More than 1200 (1999)	Affiliated limited liability company of SHBT (1995)
NJP	Radios (1953-1983) Cassette recorders (1978-1989) Video cassette recorders (1986-1996) Colour TV sets (1982 onwards) Video compact disc players (1996-1998) Computers (1998 onwards) Mobile phones (1998 onwards)	Extra large	More than 8000 (1999)	Exclusively state-owned limited liability company (1995) State-owned limited liability company with multiple investors (1999)
QDH	Radios (1969-1985) TV sets (1975 onwards) Property management (1992 onwards) Telecom equipment (1994 onwards) Computers (1996 onwards) Air conditioners (1997 onwards)	Extra large	34 (1969) About 2500 (1992) About 9200 (1999)	Exclusively state-owned limited liability company (1996)

*According to the official Chinese criteria, the boundary between large and medium firms is 500 million Yuan in both annual sales revenue and total capital. The boundary between medium and small ones is 50 million Yuan in both annual sales revenue and total capital.

In the following text, the history of the firms will be first discussed to provide an overview of the corporations. Next there is a discussion of the external relations of the firms. The main aim of this section is, firstly, to see whether there has been a fundamental difference in the institutional environment between the reformed SOEs and the traditional ones discussed in Chapter 6, and, secondly, to arrive at a preliminary explanation of the differences in business performance between the firms after corporatisation. In the rest of this chapter, a series of management and organisational issues are examined to discover how business-oriented are the activities of the firms. Finally, conclusions are drawn based on the case studies.

Most of the information used in the case studies came from my interviews with the senior managers of the sample firms. In addition, reports in newspapers and articles in journals about the sample firms were used in the cases of QDH and BJP. Since QDH and NJP each has an affiliated, listed joint stock company, the annual reports of these companies were also used. Other information accessed included internal documents obtained from all of the firms except NJA, internal meeting memos from QDH and historical information from *The Yearbooks of the Chinese Electronics Industry*.

9.1 Overview

9.1.1 Beijing Peony Electronics Group Co. Ltd (BJP)

The predecessor of BJP was the Beijing TV Set Factory, which was established in 1973 by merging a TV-set workshop from BA (the traditional SOE studied in Chapter 6) and a factory producing precision apparatus. Having received great attention from the government since its formation, the TV firm was regarded as one of a few pillar TV-set producers at that time in China. In the early stages, the firm produced B&W TV sets. In the late 1970s it was chosen by the Electronics Industry Ministry to produce colour sets, in co-operation with a German business. In 1980, when the Chinese government leader, Deng Xiaoping, invited the founder of Panasonic to visit China, the firm was designated by the government to introduce production equipment and technology from Panasonic. After the introduction of the equipment, the firm's output increased rapidly, from less than ten thousand sets to more than 150 thousand sets annually (*The Yearbook of the Chinese Electronics Industry*, 1985, p. IV-91). In order to expand the production further and take advantage of a sellers' market, the firm used government appropriations to introduce more production equipment from Panasonic in 1982 and in 1985, increasing its annual output to 225 thousand sets (ibid.). Helped by the large production capacity, the business performance of the firm was good in the following years. It was one of the top ten TV set producers in China each year from 1987 to 1992.

In 1992, after merging with another three electronics firms in Beijing, Beijing Peony Electronics Group Company was set up. In 1994 it was chosen for the MES experiment and the company was transformed into a wholly state-owned corporation, with an expectation of a further transformation into a joint stock company (for the difference between the various forms of corporations under the MES, see Chapter 1). However, the business of the firm began to worsen when competition in the Chinese domestic market for TV sets intensified, and such a transformation eventually had to be abandoned.

In 1993 the firm dropped out of the top ten domestic TV producers, although it introduced technology, for a fourth time, from Panasonic, for the production of large-screen TV sets. In the following years negative growth rates of 16% in annual sales revenues and 37% in profits were recorded (Zhou and Zhang, 1999). In order to stop the downward trend in the business, the senior management of the firm applied for permission to produce air-conditioners, video recorders and computers. However, they failed to get approval and the necessary financial support from the higher government authority because the government wanted to hold in check blind entry into these industries. The only application successes were for a project for an environment-protection product, which brought state subsidies into the firm, and a project to produce digital TV sets, for which the government put in interest-free bank loans. In addition to the financial support, the government also tried other methods to revitalise the firm. In 1997 there were extensive personnel changes organised by the Electronics Industry Ministry, in the senior management in major TV set producers whose business was worsening. The former president of BJP, who had been in the post for more than five years, was removed. The new president failed, however, to lead the firm out of business distress. He was dismissed in 1999.

9.1.2 Nanjing Audio Co. Ltd (NJA)

The history of this firm dates back to 1958. After merging several small factories, the Second Electronics Component Factory of Nanjing was established to produce loudspeakers. As one of the main electronics firms in Nanjing, it obtained financial support from the local government for its early development. In the 1980s, the production capacity of the firm grew rapidly. After registering its projects in the government's investment plans, the firm obtained quotas for foreign currency to introduce from France and Japan equipment to produce speaker systems. But, as the government began to place tighter control on fixed-assets construction after 1989, in the face of high inflation, the firm's business dropped. In order to get out of this difficulty, with the help of the local electronics industry bureau the senior management of the firm looked to export opportunities for its products, especially its loudspeakers. Thanks to exports, the firm's business showed signs of recovery. Success in overseas market also led the firm to place more emphasis on the production of loudspeakers. In 1994, when the government reformed its export and import system, the firm was granted export rights, which further helped the recovery of the firm.

In 1995 the firm obtained a licence from the government for corporatisation under the MES. After the acquisition of a collective on the order of the local electronics bureau, which brought in the firm another 1000 employees, the firm was transformed into a joint stock company with registered fixed assets of ten million Yuan. In the equity structure of the firm, state-owned shares accounted for 56%, collectively owned shares for 24%,[9] and employees' shares for 20%. In 1997, the firm obtained a quota from the government for technology transformation, which brought in interest-free bank loans of more than eight million Yuan. Helped by these loans and capital raised by issuing shares to the employees, the firm expanded its production further. In 1998 it achieved annual sales revenues of 150 million Yuan, the highest in its history. In 1999, however, the growth of business slowed down.

9.1.3 Shanghai Jinxing Electronics Ltd. (SHJX)

In the late 1960s, through the merger of two electronics component factories in Shanghai and a workshop of a radio factory, the First TV Set Factory of Shanghai was established as one of the key TV set firms in China. Like BJP, the firm received large support from government, which helped the firm's development. In the 1970s the firm produced B&W TV sets and in 1980, as one of the three key national projects for importing production equipment for colour TV sets, the firm used government subsidies of about 68 million Yuan to introduce two production lines, from Hitachi (*The Yearbook of the Chinese Electronics Industry*, 1985, p.I16). In 1982, the output volume of the firm reached 200 thousand sets annually, ranking it number one among all the TV firms in China (ibid, p. IV83). The sales revenues of the firm were the highest in the Chinese TV set industry until 1992, when Nanjing Radio Factory (the predecessor of NJP) replaced it (*The Yearbooks of the Chinese Machinery and Electronics Industry*, various years).

Also in 1992, after the higher government authority over the firm was transformed into a holding company,[10] labeled SHBT in the last chapter, the firm and TV-set workshops from another four electronics firms in Shanghai were reorganised into the Shanghai Jinxing TV Sets Factory. In 1995, the TV-set factory was transformed into Shanghai Jinxing TV Ltd, becoming one of the wholly-owned affiliates of SHBT. At the same time, and arranged by the holding company, the production capacity for B&W TV sets was removed from the Shanghai Jinxing Factory.

Capital restructuring failed to put the colour-TV producer back to the top position in the Chinese TV industry. Instead, its business performance deteriorated in the following years. From the position of number four for sales revenue, the sales of TV sets of SHBT, which included those from the Shanghai Jinxing Ltd and other TV producers subordinate to SHBT, slipped down to the tenth position by 1997.[11] In

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[9] The definition of collectively owned shares is not very clear in China and even the general manager of the firm did not know who owned these shares.

[10] The holding company is the Chinese partner of SHKW, studied in the last chapter.

[11] Besides the Shanghai Jinxing Ltd, there are other affiliates of SHBT which produce TV sets. One of them is the affiliate that absorbed the production capacity for B&W TV sets from the Shanghai Jinxing Factory. The other one was a joint venture established in 1995 by SHBT and Sony, which produced colour TV sets under the brand name 'Sony'.

1998 and 1999, SHBT failed to rank among the top ten Chinese TV producers (*The Yearbook of the Chinese Electronics Industry*, various years).

In 1998, in the face of a seemingly unstoppable decline in business and mounting debts, SHBT suspended the production at the Shanghai Jinxing TV Ltd and transferred all the assets and employees to a new establishment, named Shanghai Jinxing Electronics Ltd. (*Annual Report of SHBT Ltd.*, 1999). Along with the transformation, facilities of R&D and marketing were removed from SHJX (internal document). The new company, thereby, became only a TV production base of SHBT.

9.1.4 Nanjing Panda Electronics Group Co. Ltd. (NJP)

The history of NJP began with a national resources committee in the era of the Nationalist Party regime. After the foundation of the People's Republic of China, the committee was transformed into a state-owned factory producing military telecom equipment and was named the State-owned 714 Factory. As a key electronics firm in China, it received extensive financial support from central government and, in return, accepted many research projects for military products. In 1953, it designed the first completely domestic-made radio in China (internal documents). After that, it began to produce civilian electronic products, first radios and, later in the 1970s, B&W TV sets and cassette recorders (CRs). In 1980 it changed its name to the Nanjing Radio Factory. In 1982 it started producing colour TV sets. However it was not until 1984, after the firm introduced production lines from Panasonic, that large-scale production of colour TVs began. The firm then entered its 'golden' age. Sales revenues ranked in the top three among all the Chinese TV set producers from 1986 to 1989 (*The Yearbook of Chinese Machinery and Electronics Industry*, various years). In 1992, with annual sales revenues of 1.8 billion Yuan, the firm replaced SHJX as the number one firm in the TV industry of China (ibid.). With the firm's success in consumer electronic products, colour TV sets gradually took the place of military-related products as the mainstream business, contributing to about 90% of the firm's turnover in the early 1990s.

In 1992, on the basis of the Nanjing Radio Factory, Nanjing Panda Electronics Group Company was established. In 1995 this company was transformed into a limited liability company wholly-owned by the state. In 1993 the TV set division of the firm was separated to form a joint stock company, which in 1996 was listed on the Shanghai Stock Exchange. In the beginning, the Group Corporation held 93.2% of the shares of the affiliated joint stock company, but it soon sold about 30% of the shares to other institutions (*Annual Report of Nanjing Panda Electronics Co. Ltd.*, various years). Like most other TV producers in China, however, the business of the affiliated joint stock company began to worsen after 1994. The rate of deterioration quickened after 1997 and losses resulted. In 1998 losses amounted to more than 495 million Yuan (ibid.). Since the Group Corporation depended mainly on the production of TV sets for revenue, the decline of the affiliated joint stock company pitched the Group Corporation into crisis. In order to tackle the problem, in 1999, with approval from the Nanjing Government, the senior management of the Group Corporation set aside 300 million Yuan to buy unhealthy assets from the affiliated joint stock company, paid for in the form of shares. They also put their new mobile telecoms business into the listed joint stock company and transformed the production of TV sets into an affiliated company subordinate to the listed joint stock company. At the same time, in another step to get out of its financial difficulty, asset restructuring was conducted in the Group Corporation. At the end of 1999, the governments of Nanjing municipality and Jiansu province each invested 250 million Yuan in the firm, in the names of Jiangsu Trust and Investment Corporation and Nanjing Xinguang Development Head Office, respectively. NJP then became a state-owned corporation with multiple investors.

9.1.5 Qingdao Hisense Electronics Group Co. Ltd. (QDH)

This firm was developed from a factory established in 1969, which was attached to a cadre school. Because of the small size of the firm - only 34 employees and less than 100 thousand Yuan in assets - and its status as a cadre school-owned factory, there was very little, if any, technical and financial support from government. However, the firm self-developed a transistor-radio model, which was put into production in 1971 (internal document). In 1975, it began to produce B&W TV sets, again through self-development. Because of a lack of subsidies from government to support production expansion, the firm's output of TV sets, at about 2500 sets annually, was very low compared with the major TV producers in China. After the cadre school was abolished at the end of the Great Cultural Revolution (GCR), the factory was transferred to the Qingdao Electronics Bureau and was renamed the Qingdao TV Sets Factory.

In the 1980s the central planning system began to be dismantled and the firm started to sell its products in the market. Its sales revenues grew rapidly in the first half of the 1980s. In 1984, in the face of an increasing market demand for colour TV sets, the firm introduced production equipment from Panasonic. This was the first time that the firm had succeeded when applying for a large amount of capital from the local government; although this project failed to be listed in the national programme for importing production equipment for colour TVs. Using state subsidies and self-accumulated capital, new equipment and technology were brought in. In 1985, the firm was ranked first among TV set producers in Shangdong province, in terms of sales revenues. The growth of the firm during the period from 1986 to 1992, as in the case of most other Chinese TV-set producers, was rapid. In 1992, with about 2500 employees, the firm achieved sales revenues of more than 400 million Yuan (internal document).

In 1992 Mr Zhou was promoted from chief engineer of the firm to general manager. His first action was to restructure the firm, removing non-business related departments, most of them Party organs. This decreased the number of major departments in the firm from twenty-two to ten. Six production shops and one sub-factory were transformed into six affiliates and a technical research centre was set up on the basis of the former technical department (internal document). In addition, in 1993 the firm changed the brand name used since the firm's establishment, from 'Qingdao' to 'Hisense'. In 1994 the firm was renamed 'Qingdao Hesense Electronics Inc' and in 1996 it was transformed into the Qingdao Hisense Group Corporation Ltd (QDH). Also in 1994, the affiliate of the firm that produced TV sets was transformed into a joint stock company, and in 1997 the affiliate joint stock company was listed on the Shanghai Stock Exchange.

After Mr Zhou took charge, changes happened extending beyond the restructuring of the firm. Although he was appointed, like other senior managers in SOEs, by higher government authority to manage a firm owned nominally by all the people, but, in practice, arguably by nobody, Mr Zhou ran the firm as if he owned it (*China Finance*

Newspaper, 25th May 1999). With such an attitude, he focused on the long-term development and consistent growth of the firm, even sometimes at the price of short-term profits. In order to sustain competitive advantage in the market, the senior management invested one billion Yuan in the firm's technical research centre after 1993, of which 300 million Yuan was used for the centre's infrastructure. This compared to a total investment of less than 100 million Yuan in other infrastructures of the corporation during the same period (*Qingdao daily*, 12th Feb 2000). When the market for colour TV sets in China began to show signs of saturation, the firm entered the telecoms industry. In 1994, in co-operation with the American company AT&T, the firm became the first TV set producer in China to become involved in civilian telecom production. In addition, in order to absorb redundant employees caused by organisational restructuring, a new business were developed in restaurant and hotel management, which became one of the firm's new growth points in the second half of the 1990s.

In 1996, the senior management of the firm set up an affiliate to produce computers, after the technical research centre succeeded in developing a model more advanced than that of most other domestic computer producers at the time. In 1997, with capital raised from overseas, an affiliate was established to produce air-conditioners (ACs). As a late entrant into the AC industry, the affiliate's first product was a frequency-controllable air-conditioner, a model that domestic manufacturers had not yet produced. Advanced products and frequent innovations enabled the computer and the AC affiliates to catch up with, and even overtake, most early entrants. The sales revenues of the firm from computers ranked sixth and those from ACs ranked fourth in China in 1999. When the price war in the domestic market for colour TVs intensified in the second half of the 1990s, unlike most other domestic producers QDH focused on differentiating its products by adding new features, instead of reducing prices sharply. The strategy adopted by QDH was successful. The firm's sales revenues from TV sets grew steadily after 1993, in sharp contrast to most other domestic TV set firms, including NJP, BJP and SHJX; all of which had a better business performance than QDH in the early 1990s. In 1999 both the production volume and the sales revenue of the firm's TV-set business ranked fourth in China.

Because of successes in the production of TV sets, computers and air-conditioners, and in the service industry, the firm enjoyed a phenomenal growth after 1992: net assets increased from 160 million Yuan in 1992 to 1.84 billion Yuan in 1998; sales revenues from 400 million Yuan to 8.23 billion Yuan; profits from 12.9 million Yuan to 279 million Yuan; and the number of employees from 2500 to 9200 (including the employees in the affiliates where QDH held equities) (internal documents). Unlike many state firms, the firm had achieved a healthy financial state. The ratio of liabilities-to-assets decreased from 78% to 62% during the same period. In 1998, Mr Zhou made a decision to slow the pace of growth and expansion so as to improve further the circulation of capital. By the end of 1998, the level of product stock in the firm was reduced by 30%, and the ratio of liabilities-to-assets had decreased to 60%. This ratio had fallen further to 56% by the end of 1999 (internal documents; *China Information Newspaper*, 5th Jan 2000).

9.1.6 Sub-summary

Similar to the traditional SOEs described in Chapter 6, the histories of most of the corporatised SOEs are fairly straightforward. Generally speaking, the main features of their stories are production quotas in the pre-reform era and blind expansion in size, supported by government subsidies and soft bank loans, both before and after the start of the economic reforms. They thrived when the market situation was in favour of them and declined when the market for their products became saturated. In order to obtain subsidies or soft bank loans, they managed to register their investment projects in the government's plans. However, exceptions do exist among the firms. In contrast to the other firms studied in this chapter, which thrived in the pre-reform era and in the 1980s, but were trapped in business distress afterwards, QDH showed a reverse development trend. With much less financial support from government agencies in its early stages, the firm developed strongly under the entrepreneurship of its current manager. Helped by the continuous introduction of new and innovative products, QDH enjoyed market success throughout the 1990s.

9.2 External Relations

Because the five corporations were transformed from traditional SOEs, they certainly bore some characteristics of the latter, especially in terms of their relationship with superior government authorities, state banks and the market. However, the situations in these firms studied here were not completely identical, with QDH behaving more like a business entity than the other firms.

9.2.1 Relations with Government Agencies

All of the five firms studied had superior government authorities before and after their corporatisation, even though there were non-state shares in NJA. Before 1999, NJP reported directly to the Electronics Industry Ministry and the State Council. After 1999, the firm was accountable to the government of Jiangsu province.

All the firms studied received government subsidies or soft bank loans before their corporatisation. This kind of financial support was most obvious in the case of NJP, which was subordinate to the central government. Soft budget constraints were also apparent in the cases of BJP, SHJX and NJA. The former two firms were regarded as key TV producers in China and the latter as a 'candle' firm for the electronics component industry of Nanjing city. After these firms were corporatised, soft bank loans did not stop. Projects for large screen TV production in BJP, NJP and SHJX and for video compact disc players in NJP were all registered in the government's investment plans and were sponsored by bank loans issued on the orders of the government. When the new round of national projects for technology transformation began in the middle and late 1990s, these firms, considered to be key SOEs, were registered and obtained interest-free bank loans, in amounts ranging from eight million Yuan in the case of NJA to 300 million Yuan for NJP. Because of the miserable business condition in PBP, SHJX and NJP in the mid and late 1990s, large amounts of unpaid bank loans accumulated, resulting in a ratio of liabilities-to assets exceeding 70%. In addition, BJP and NJP continued to absorb state subsidies intended for developing environment-protection products and military production.

It seems that QDH was the firm that obtained the least government help in terms of capital injection in the 1980s, probably because it was transferred to the local government of Qingdao city after the Great Cultural Revolution and this city was perceived by central government to be peripheral in the Chinese economy at the time. The firm's introduction of production equipment from Japan in 1984 was the only large project that obtained financial support from the local government before the 1990s. In the light of the firm's steady growth in the 1990s, however, it was able to be included in many national investment projects, such as that for technology transformation sponsored by interest-free bank loans.

As in the traditional SOEs studied in Chapter 6, higher government authorities appointed the major managers of the corporations studied here and evaluated their performance. Government intervention was most extensive in NJP. Before 1999, the general manager and the Party secretary of the firm were appointed jointly by the State Council, the Electronics Industry Ministry and the Labour Ministry. After power was delegated within government, they were appointed by the Jiangsu provincial government. Government influence was even involved in the appointment of other managers in the firm: the candidates for vice general managerial posts at the Group Corporation and those for the senior managers of affiliates had to be approved by the higher authorities. In the other four firms, involvement of higher authority in top management appointments was smaller; only the general manager, the Party secretary and the directors on the boards were appointed by the local authorities.

Higher government authorities also tended to intervene heavily in important decisions of the corporations. Having long been subordinate to and having received extensive financial support from government agencies, NJP, NJA, SHJX and BJP seem to have got used to being compliant with the decisions made by superior authorities. For example, the acquisition of other firms during the corporatisation of BJP and of NJA was conducted under the local government's auspices. Buying by NJP of the unhealthy assets of its affiliated joint stock company and shifting the main business of the joint stock company were undertaken only after getting approval from, or under the direct involvement of, higher authorities. Through intervening in major decisions of the firms, the superior authorities could influence greatly the setting of the firms' objectives, some of which were non-business related. For example, under the government's requirement, in the late 1990s the management of NJP made great efforts to maintain social stability among its employees while its business performance was worsening. In NJA, the management also mentioned their efforts to win the title of 'model enterprise in socialist ideology', as encouraged by the local authority.

Furthermore, government agencies sometimes intervened in the operational affairs of the firms. For instance, in September 1995 the general manager of SHJX decided to stop production temporarily in the face of large amounts of uncollected payments and large quantities of stocks. However, the higher authority, SHBT, a substantial part of whose revenues came from SHJX, disagreed with this decision, fearing that it would not be able to fulfill its annual target for industry output. The conflict ended with continued production and an accumulation of unsold goods.

Similar administrative intervention also happened in the case of QDH, but the results seem to have been different. Historically less dependent on local government, the senior management of the firm tended to follow their own decisions on business affairs, although sometimes their resistance to administrative intervention failed. When the TV sector of QDH was transformed into a joint stock company in 1994, for example, according to a common practice at that time in China, the local government asked for an integration of the management of both the Group Corporation and the affiliated joint stock company. However, ignored this requirement and insisted on a separation of the management and a mother-and-son relationship between the two enterprises (internal documents). As another example, in 1999, after the senior management of the firm had decided to slow down the pace of expansion and focus on keeping a healthy capital flow, the local government issued a directive requiring the firm to implement a project with investment of 70 million Yuan. Mr rejected the directive and stuck to the objective of reducing the firm's liabilities-to-assets ratio (meeting minutes). However, the results were not always so positive. In 1994, for example, when the management of QDH made a proposal to the local authority to multiply the number of investors in the Group Corporation, the local government did not approve the requirement because it did not want the firm to give up its shares in the joint venture with AT&T (internal documents).

9.2.2 Relations with Banks

Like the traditional SOEs, on the whole the corporations took bank loans facilitated by government agencies, provided that their investment projects were registered. Probably because the corporations had a more important position in the economy than non-corporatised ones, the former seemed to get easier access to soft loans. However, there was a common observation among the traditional SOEs studied and some of the corporations discussed in this chapter. As in the traditional SOEs, there were in BJP, NJP and SHJX large amounts of bank loans that were due for repayment but the firms were unable to repay. The solution for the banks was the same in both the cases of these three corporations and those of the traditional SOEs studied; that is, to extend the deadlines for repayment. Furthermore, failing to repay old loans did not seem to be a handicap to getting new ones; none of the three corporations failed to obtain loans for technology transformation. Rather, worsening performance was sometimes exactly the reason why new loans were granted. The Shanghai municipal government, for example, facilitated large amounts of bank loans to SHJX when the firm's business deteriorated in the late 1990s. As a result mainly of the unpaid bank loans, the three firms all had high ratios of liabilities-to-assets, ranging from 76% in BJP to more than 80% in NJP by 1999. There were unpaid bank loans in NJA, too, especially in the early 1990s; although this problem lessened later, partly because of the capital raised by issuing shares to employees, and partly because of a slow business recovery.

QDH's relations with state banks stand in marked contrast to those of the above corporations. Receiving much less government financial support, the firm used multiple sources for its investment projects. When its affiliated joint stock company was allowed to be listed on China's stock exchanges in 1997, the firm raised 626 million Yuan by issuing shares. In 1998, because of the good business record of the joint stock company, more shares were approved to be issued and QDH raised capital of another 26 million Yuan (internal document). In addition, business prosperity also attracted large amounts of overseas investment. Converse to what happened in the above corporations, where hunger for bank loans was combined by a lack of ability to repay, it was said by the interviewed manager that banks sometimes came to QDH and asked the management to take loans.

9.2.3 Relations with The Market

The relationship of the firms with the market seemed to be closely associated with their relationship with government agencies. The greater extent of government financial support and administrative intervention, the less the exposure of the firms to market competition. In the cases of BJP, NJP and SHJX, the protection from government agencies seems to have handicapped them in developing an ability to gain competitive advantage in the market. As was experienced in the traditional SOEs studied in Chapter 6, the three corporations enjoyed high profits when the market for their products was buoyant and were trapped in business hardship when market competition became fierce. After corporatisation they still could not jump out of this cycle. Like the traditional SOEs studied, it seems that they made few active efforts to differentiate their products, although they had a much stronger R&D establishment than the traditional SOEs. In each of BJP and SHJX there was a government-sponsored technical research centre[12] and in NJP there were five such research establishments. However, these centres seemed seldom helpful in product development and innovation. It was reported by the interviewed managers that most of the new products produced by the firms were introduced after there had already been similar products sold in the domestic market by other producers.

There was, however, evidence of an improved market consciousness in NJA, which gradually developed after the firm expanded its export of loudspeakers. Since there was no government protection in the overseas market, the firm had to develop its ability to compete. Great efforts were made, for example, to collect information on changes in the preferences of overseas customers. In addition, the firm also developed close co-operative relations with its suppliers, looking for new materials and possible new product designs. The senior manager interviewed confirmed that these newly gained abilities also helped the firm's business in the domestic market.

Developing from a small firm attached to a cadre school, QDH had a loose relationship with local government in its early stages and, therefore, seems to have depended, to a great extent, on the market for its growth. It appears that this situation helped the firm develop market-oriented behaviour, which was further enhanced under the leadership of ı. Great management attention and large quantities of capital were put into developing new products, for example. Unlike its counterparts in BJP, NJP and SHJX, with 42 PhDs and about 150 masters degree holders and an annual capital input of over 4% of the firm's turnover, the R&D centre in QDH contributed greatly to the firm's market success in the 1990s. In the second half of the 1990s, when most TV set producers in China were involved in price wars, QDH focused on differentiating its products. In 1999, for instance, it put on the market a series of 'green' TV sets with much lesser harmful radiation than traditional products. Within two months of entering the market, 100 thousand of this TV set were sold, contributing greatly to the firm's position as fourth in sales revenue among Chinese TV producers in that year (*China Business Times*, 2nd June 1999). In general, product innovations in QDH were frequent. In 1998, for instance, there were 111 improved products, almost one new product every two and a half days (*China tax paper*, 7th June 1999). In addition to the success in terms of product development, the market consciousness of the senior management was also reflected in their obsession with product quality and customer service. Every year the senior management set a market objective. For example, 1998 was called 'the year of quality' and 1999 'the year of 100% customer satisfaction'. These efforts were rewarded. By the end of 1999, both the quality of the firm's TV sets and its after-sale services ranked first in a survey conducted jointly by the Industrial Economic Association of China and the Survey and Statistics Agency of China (*China Consumer Paper*, 27th February 2000).

9.2.4 Sub-summary

Generally speaking, the reformed SOEs operated in a similar institutional environment to that of the traditional ones studied in Chapter 6, but with variations. As key electronics producers, NJP, BJP, and SHJX had close relationship with their superior authorities. They received extensive financial support from government agencies and suffered major administrative intervention. Such a paternalistic relationship resulted in continued soft budget constraints and inadequate exposure of the firms to market competition. Consequently, like the traditional SOEs studied, the

[12] As described in the overview above, the research centre in SHJX was stripped out by its holding

three corporations faced a financial crisis when market competition became increasingly fierce. Accustomed to the comfort of being protected by the government, few active efforts seem to have been made by the firms' management to get out of their business distress.

The relationship of NJA with government agencies and state-owned banks were similar to those of the above three firms. The government authority intervened in the firm's important business decisions and channeled in soft bank loans. However, in the 1990s the financial difficulty in NJA appears to have been less than in the above firms. Most of the credit for the gradual business recovery of the firm seems to go to the management's market consciousness, developed by producing for the overseas market. This suggests that inadequate exposure to market competition may be an important reason for the inactiveness observed in the above incorporated SOEs, as well as the traditional ones studied in Chapter 6.

QDH had a looser relationship with its local government authority in its early years. When the firm grew rapidly and became more and more important to the local economy, local government intended to have a tighter control over it and to put it under the same system of accountability as that of the other state-owned corporations studied. However, generally this has not occurred. Having been socialised in a culture of independence from local government, the powerful leader of QDH, insisted on giving priority to the firm's business objectives and succeeded in rejecting a number of administrative interventions. At the same time, however, complete autonomy has not been realised; when it came to the issue of ownership, the management had to give up its proposal for introducing multiple investors, in the face of opposition from the local government. Nevertheless, having been exposed more to market competition and dependant less on government agencies than the other state corporations reviewed here, QDH has developed a greater ability to face market challenges.

In short, based on the case studies reviewed here, so far there do not appear to have been fundamental changes in the external relations of state firms after corporatisation.

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company, SHBT, in 1999.

Intervention and financial support from government agencies and a lack of exposure to market competition are still major problems. At the same time, the case studies suggest, especially in the case of QDH, that the historical path of a firm has a great effect on its later behaviour. This is what economists call 'path dependence' (Arthur, 1988; North, 1990). In addition, the case of QDH implies that enlarged management autonomy from governance agencies may increase the effectiveness of senior management and therefore a firm's performance. As Nolan and Wang (1999) argue, a powerful manager is important in the process of institutional innovation in China's large SOEs.

9.3 Internal Structure

Generally speaking, the organisational structure of the corporations reviewed in this chapter became slimmer during the 1990s. This was achieved, as in the traditional SOEs studied in Chapter 6, through streamlining functional departments and changing some business divisions into separate affiliates. However, as shown below, the effectiveness of the organisational structure in serving the business needs of the corporations differed.

9.3.1 Streamlining Functional Departments

Major streamlining in all of the corporations studied, except QDH, happened in the second half of the 1990s; but this had no apparent direct connection with the process of corporatisation. Except for absorbing the corresponding departments of acquired firms, no other obvious structural changes took place in the four firms during the process of corporatisation. Coincident in time with the main organisational restructuring in the traditional SOEs (see Chapter 6), a large-scale structural rationalisation was conducted in the four incorporated SOEs after 1995. The time coincidence suggests that the organisational restructuring in the corporations, except QDH, and in the traditional SOEs resulted from policy changes at central government level.

After merging functional departments and transforming business divisions into affiliates, the number of functional departments at the headquarters of the four firms was greatly reduced. For example, twenty departments were condensed to nine in SHJX, fifteen to four in NJA, and nine to five in BJP. With a larger size and a more important position in the Chinese electronics industry (CEI), NJP had more departments than the other corporations studied here before its organisational restructuring. After shaking off some functional units, the number of departments at the headquarters of NJP decreased from twenty two to eleven. However, the rationalised structure was not designed completely to serve business needs. For example, a department called 'the people's arm department' was retained after the restructuring. This unit was a vestige of the former military-defense firm, although the main function of this department shifted from military defense to providing help in national or regional emergencies, such as floods and other natural disasters (internal document; chart of the organisational structure).

Major organisational restructuring in QDH was conducted under the initiative of the senior management rather than in response to government directives. Early in 1992, when took power, QDH conducted a shake-up of its non-business related departments and transformed its business divisions into affiliates. The firm's structure did not change much afterwards, except for a further condensing of the Party organs and the establishment of an overseas development department to take charge of the firm's rapidly developing business in the international market. Compared with NJP, where the number of employees was a little smaller, the structure of QDH seems to be much slimmer and more effective in serving business needs.

9.3.2 Structural Relations between the Group Corporation and the Affiliated Joint Stock Company

Both NJP and QDH had an affiliated joint stock company, but the structural relationship between the Group Corporation and the listed company was different in the two firms. In NJP, a common practice among Chinese state corporations was adopted; the management of the Group Corporation and that of the affiliate, listed company were integrated. The integration of management was likely to blur the boundary between the 'mother' corporation and the 'son' company, and in the case of

NJP contaminated the listed company with non-business objectives. For example, the management of the listed joint stock company was required to maintain social stability by maintaining employment as far as possible. In a new organisational restructuring in 1999, the functional departments of the holding corporation and the affiliate company were integrated. This meant that there was as much structural fat in the joint stock company as in the Group Corporation. By contrast, the senior management of QDH always insisted on the independence of its affiliated joint stock company from the Group Corporation. The management of the joint stock company had autonomy to make decisions on business affairs and treated the 'mother' corporation only as a major shareholder. The 'mother' corporation assigned profit targets to and received dividends from the listed company.

9.3.3 Composition of the Boards of Directors

When the firms were coporatised, a board of directors was set up, according to the Company Law in China. This was a governance structure copied from the Anglo-American model. Table 9.2 gives the detail of the composition of the boards in the corporations studied. Because in 1998 SHJX became an affiliated production base wholly owned by SHBT, there was no board in SHJX at the time of the itnerview.

Table 9.2 Composition of the Boards of Directors

	BJP	NJA	NJP	QDH
Total number of directors on the board	5	5	10	8
Number of executives as directors	2	3	4	4
Number of full-time Party cadres as directors #	1	1	3	2
Number of government representatives as directors	2	1	2	0
Number of other directors	0	0	1	2*

The Party cadres include the Party secretary, chairman of trade union and other full-time cadres in the Party organs within the corporations.
* The two directors in QDH were full-time directors who had no other posts in either the firm or government agencies.

It can be seen from the table that there was a heavy duality of executives and directorships in all of the four transformed SOEs studied. Party cadres were also represented on the boards. Except in QDH, there was also a heavy involvement of government officials at the board level. The exclusion of government bureaucrats on the board of QDH was reported by the interviewed manager as helpful to the firm when it had to resist administrative interventions. However, in BJP and NJA the board was made up exclusively of the aforementioned three types of directors. The only director in NJP who was not from these three sources came from the Nanjing branch of the Industry and Commerce Bank of China, which is state-owned. The insider directors and those from government agencies were remunerated according to their posts in the firms and in the agencies, respectively, providing no obvious incentive for them to play an effective role as directors. The heavy involvement of insiders and government officials on the board and a lack of incentives for directors handicap the efficacy of the board as an element of corporate governance copied from the Western World (Tam, 1999). As a result, there seems to have been little fundamental change in the nature of governance arrangements when the state firms were transformed into corporations, in contrast to the apparent expectation of central government when the MES was introduced. Furthermore, the managers in the firms interviewed explained that, with the establishment of the boards of directors in the corporations, administrative intervention was partly conducted through the new boards. In addition, all of the directors in the corporations studied were appointed by government authorities, even though there were non-state shares in NJA. However, when interpreting the dominant role of the government in appointing the directors found in these case studies, the bias of state shares in the sample firms has to be borne in mind. Four of the five sample firms are wholly state-owned corporations. As a result, the comments here may not apply to Chinese firms with (large) proportions of private or foreign-owned capital.

9.4 Management

9.4.1 Appointment of Top Managers

As in the traditional SOEs studied in Chapter 6, government agencies intervened heavily in the appointment of the top managers of the reformed SOEs. The degree of this kind of involvement seems to have been associated with the position of the firms in the CEI. The CEO and the Party secretary (in the case of QDH the two posts were occupied by the same person) were directly appointed by superior authorities. Like the unreformed SOEs, all of the corporations, except NJP, could nominate vice CEOs, but had to get approval from supervisory agencies before appointing them. In NJP, a firm once subordinate to central government and regarded as one of the few key electronics producers in China, government's interference in appointing managers was heavier than in the other corporations studied. Not only were vice CEOs appointed by the government, but candidates for the senior managerial posts in affiliates also had to be approved by higher authorities. Although NJP became subordinate to the Jiangsu provincial government in 1999, the practice of appointing major managers did not change. The observation that there was a relatively heavier involvement of government in the appointment of top managers in the reformed SOEs studied here, than in the traditional state firms, confirms one of the finding of the questionnaire survey reported in Chapter 5. In addition, evidence from the case studies suggests that the boards of directors did not play an active role in senior management appointments.

Personnel changes in top managerial posts in the corporations studied were not associated with the process of corporatisation. Most of the major pre-corporatisation managers took up the same posts post-corporatisaion. However, different from what happened in the traditional SOEs reviewed in Chapter 6, where there were few personnel changes at the top managerial level in the 1990s even in the face of deteriorating business performance, frequent changes in the incumbents at CEO level did take place in the late 1990s in the corporations with deteriorating performance. In 1997, after having held power for a long time, the CEOs of BJP, NJP and SHJX were changed, following their failure to restore their firms to health. A continued deterioration in performance led to other senior-management changes in BJP and SHJX in 1999, and another two changes in NJP in 1998 and 1999, respectively. More frequent personnel changes at the CEO level in these firms may be explained by the greater attention paid by the government to these corporations than to the traditional SOEs. However, senior-management changes seem to have had little effect in terms of improving the firms' performance, perhaps because there was no or limited damage to the benefits received by the removed managers. Apart from those who retired, most of the other CEOs dismissed were transferred to similar posts in other SOEs or in government agencies, as was also the practice in the traditional SOEs studied. A competitive manager labour market does not exist in the state sector, even among the corporatised SOEs; the major senior managerial posts in these firms are still politically occupied. Since there is an absence of incentives for the controlling authorities to select the best managers for state firms (Zhang, 1998) and little harm to the interests of the managers if they fail to improve their firms' business, it is probably safe to argue that the CEOs do not make much effort to revitalise their enterprises.

9.4.2 Remuneration of Top Managers

Since the top managers of most of the corporations studied were politically appointed, the government authorities conducted an evaluation for these managers to assess them as Party cadres. This practice was common in all the state firms studied - incorporated and traditional ones - and, generally, had no effect on the remuneration of the managers. In addition to this ritualised annual evaluation, the CEOs were evaluated mainly according to targets set by higher government authorities for profits and the rate of increase of state-owned assets. In NJP and SHJX, as in the traditional SOEs studied, a national salary system was still in use for CEOs and other managers. There was, therefore, a lack of a clear link between managerial remuneration and individual performance. An annual salary system was implemented in the other three corporations and the results of a year-end evaluation of the firms' performance determined the level of the bonuses the CEOs earned. However, it seems that, even under this new salary system, the CEO of BJP failed to improve the firm's business performance. Set against bonus incentives, the CEO faced heavy administrative intervention in the firm's business. In other words, the firm's senior management did not have decisive authority over the operation of the enterprise.

Within the firms that had implemented the annual salary system, the level of the incomes of the vice CEOs was determined by their performance, evaluated mainly by the CEO. However, the rigorousness of these evaluations differed from firm to firm. In BJP, because the management autonomy was restricted by frequent government intervention, it seems to have been difficult to evaluate objectively the performance of the vice CEOs and therefore to create a direct link between individual performance and remuneration. In NJA, the performance of the vice CEOs seems to have been better evaluated because there were clear targets for the export business; in addition, managerial shareholding was implemented in this firm, which was reported by the interviewed manager to have provided further performance incentives for top managers.

The most rigorous evaluation of the performance of vice CEOs was found in QDH. In order to ensure the fulfillment of business targets, the senior management had designed an effective control and remuneration system, similar to that found in some of the collectives and the joint ventures discussed in previous chapters. Remunerated by an annual salary system, the total income of a vice CEO was separated into year-end bonuses and monthly salary, which was further divided into basic salary and performance salary. Every vice CEO signed with the CEO an annual task agreement, which specified the main tasks and business targets the vice manager had to complete or meet. Every month the vice CEOs signed a monthly task agreement, where annual tasks and targets were divided into monthly ones. At the executive meeting that was held once a month among managers at and above the middle levels and senior managers of affiliates, the performance of vice CEOs was evaluated against the task agreements they signed. The results determined the monthly bonuses. In this sense, QDH was the most advanced of the five corporations studied in linking the pay of senior management to individual performance.

9.4.3 Appointment of Middle Managers

The corporations studied all had full autonomy when appointing middle managers. When there were vacancies at middle managerial level, the common practice in BJP, NJA, NJP and SHJX was similar to that found in the traditional SOEs studied in Chapter 6. That is to say, the superior nominated the candidates from the firm's manager bank. The preference for internal promotion may have prevented 'new blood' flowing into the firms; new blood which might have challenged the traditional ways of doing things.

Compared with the other four firms, QDH seems to have employed superior practices to attract and promote people of ability to middle management posts. Public recruitment was frequently used to create competitive pressure on insiders who also applied for the positions. The result was a broader range of people from which to select and appoint. After giving a public statement about their business proposals, the candidates took exams and were later questioned and interviewed by a group made up of the firm's senior managers, professors from universities and outside human-resource-management experts. In 1999, for example, four ordinary employees were thereby chosen as middle managers in the affiliated joint stock company of QDH (*Qingdao Daily*, 12th Feb 2000).

9.4.4 Remuneration of Middle Managers

In BJP, NJP and SHJX, middle managers were remunerated by a traditional salary system and their incomes were therefore poorly linked to individual performance. As in the traditional SOEs studied, the performance of the middle managers in these three corporations was assessed by the Party's organisation department. It is, therefore, doubtful that these evaluations were conducted on the basis of business concerns. Rather, it is more likely that they reflected ideological and political criteria. In any event, the results of this evaluation were not reflected in the managers' incomes. In NJP, for example, there was no bonus or other element in the salary package to link management remuneration to individual performance. Although there was a floating part in the monthly salaries of the managers in BJP and SHJX, this seems to have failed to provide incentives to achieve higher performance because the floating wages had almost become fixed and ritualised.

Using the same remuneration system as that for the vice CEOs, the salaries of middle managers in QDH were much more incentive based than those in the other corporations studied. Every month, every department manager signed a task agreement with his superior, against which his/her performance was evaluated. The evaluation results not only determined the monthly bonuses of the managers, but served as an indicator for the bonuses of the employees subordinated to them (internal document). Furthermore, the aggregate results of the monthly evaluations were worked out at the end of the year to determine the future of the managers. All of the department managers at the headquarters were ranked every year according to their aggregate score. Those who ranked among the last three were removed from their posts if they failed to improve their performance in the following six months. Similarly, senior managers of affiliates were also ranked and those among the last three were removed without further observation.

9.4.5 Managerial Training

After corporatisation most of the major managers in the reformed SOEs studied remained in their posts. This may pose a danger to the firms in that the old habits and mental attitudes of state firms may continue into the new corporations. This was evident in the case studies. It seems that top management in NJP, NJA, BJP and SHJX failed to adjust their ways of thinking in accordance with the emerging market economy in China and there was little evidence of a new approach to management training in the firms.

Having realised the need to change mindsets in the management, QDH, by contrast, invested heavily in management training. Early in 1992, after took over the firm, all of the managerial staff were grouped into six batches and sent, in turn, to Shangdong University to take a six-month intensive course on management. The whole programme lasted more than three years, and, as reported by the interviewed manager, the results contributed to improving the quality and ability of the firm's managers. In 1996 the firm set up a college to organise regular management courses for employees. In addition, those candidates for managerial posts who were selected after going through the whole process described earlier were sent on management courses in China or abroad before taking up their new posts. Through these training programmes, QDH expected to equip its managers with appropriate knowledge and skills to compete in the new, market environment.

9.5 Labour

9.5.1 Structure of the Workforce

All of the employees in the corporations studied were employed on labour contracts after the new Labour Law was put into effect in 1995. However, the structure of the workforce in most of the reformed SOEs studied remained inflexible. The exception was QDH, which adopted more 'flexible' employment practices.

The inflexible nature of the workforce in most of the corporations studied was reflected, firstly, in the extensive use of long-term employment contracts. All the firms, except QDH, had employees working on contracts of non-fixed term. The proportion of such employees was largest in NJP and BJP, accounting for 20%-30% of their whole workforce. Also, as in the traditional SOEs studied in Chapter 6, the terms of fixed-period employment contracts used in the corporations ranged from three years to six years, longer than in most of the non-state firms discussed in the preceding chapters.

The inflexible nature of the workforce in the four corporations was reflected, secondly, in the small number of temporary workers employed. Temporary labour employed by BJP and SHJX served only as cleaners. Although temporary workers were employed in NJA and NJP for production, their numbers were small. The infrequent use of temporary workers in production and the long-term nature of employment contracts both made it difficult for firms to adjust the size of their workforce to actual business needs. By contrast, QDH made much more extensive use of temporary workers. Among the firm's over 9000 employees, between 2000 and 3000 were seasonal workers. They were hired when production peaked and were dismissed afterwards.

9.5.2 Labour Rationalisation

Like the traditional SOEs, most of the corporations studied suffered a serious problem of overmanning. Labour rationalisation in NJP, BJP, NJA and SHJX was conducted mainly in the second half of the 1990s, as a result of organisational restructuring. Most of the affected non-manual employees were transferred to similar posts in affiliated firms. Another measure used to tackle overmanning was to ask those relatively older employees to retire before the officially designated age. The rest of the redundant employees were laid off. However, after these measures were used, the firms studied, excluding QDH, still reported overstaffing among production workers and support staff. This suggests that the firms, which were originally designed as production units and communities for the employees and their families, seem to have continued to suffer from a problem of overmanning even though they had been corporatised.

Labour redundancy also happened in QDH, but in a somewhat different context. Initiated by in 1992, immediately after he took over the firm, a large-scale organisational restructuring was conducted in the firm. Redundant employees were absorbed by new businesses in the service industry, which were established by the firm and later became some of the firm's new growth points. In the following years, the senior management of the firm developed a new employment practice designed to maintain high labour productivity by causing 'deliberate' labour redundancy. All of the current employees were asked to compete with both their colleagues and outsiders, who came from all over the country, for job posts at and below the level of department managers. Those who lost out and those who refused to compete had to stay at home. The firm ceased to pay salaries to them (the interview and internal document).

9.6 Conclusions

In the face of the failure of previous reform measures to revitalise many of China's SOEs, the government launched the MES in the 1990s, aimed at clarifying property rights and improving corporate governance of state firms (see Chapter 3). Thereby, the government hoped to raise the level of efficiency in the Chinese economy as a whole. Firms, the vast majority of which were SOEs that had a key position in their industry or in local economies, were chosen by government agencies to take part in the MES. As a result of their change in status, the firms were expected to become business entities operating according to market signals rather than being administrative units of government.

In this chapter five corporatised SOEs have been discussed, based on interviews conducted in early 2000 and with supporting documentation. The aim was to assess the effects of the MES. Of the five enterprises, three were wholly state-owned corporations, one was an affiliate of a state holding company and the other an unlisted joint stock company. By examining changes in the corporations in the 1990s and by comparing them with the firms studied in the previous chapters (chapters 6 to 8), this chapter has discussed to see whether and how the institutional arrangements under the MES impacted on the nature and behaviour of the firms.

Evidence from the five reformed SOEs shows that so far there has been little fundamental change in the structure of property rights following corporatisation. There is no evidence of increased managerial incentives or an improved principal-agent relationship, which could lead to higher operating efficiency. The state controls all of the equity of the firms in the case of the wholly state-owned corporations and the majority of shares in the case of NJA, the unlisted joint stock company. This means, in essence, that there is no real difference in the ownership of the firms in spite of corporatisation. There is still no clearly defined owner(s) of the state-owned equities or shares; corporatisation has not solved the problem of the ambiguous property rights faced by state firms. One result is that government agencies or 'higher authorities' tend to continue to intervene extensively in the management of the firms.

The MES seems not to have succeeded in improving the governance arrangements of the corporations. Copied from the Anglo-American model of corporations, boards of directors have been set up in four of the corporations studied. It was expected that the boards would serve as a cushion from government intervention (Tam, 1999), but in reality they do not seem to have functioned effectively. As the decision-making body in the corporations, the boards of directors are supposed to have the final say on the firms' strategic development and the appointment of CEOs, as specified by the 'Guidelines on Articles of Association for Listed Companies' enacted in China in 1997 (see Chapter 2). What actually seems to have happened, however, is that these matters usually continue to be decided with the direct involvement of higher government agencies. There is, therefore, still a lack of a clear line between the responsibilities of the government and those of the management of the enterprises. The dysfunction of the board of directors also seems to lie in its composition. There appears to be a heavy presence of representatives from government agencies on the boards and an absence of effective incentive mechanisms for directors to take good care of the assets and monitor business performance. Similar findings are also made by Tam (1999) and Lin (2001). Another problem with the composition of the boards is a lack of independent directors. Comprised mainly of executives, Party cadres and government officials, the boards seem to serve just as another platform for government intervention, with the firms remaining compliant.

Therefore, it seems from the case studies that, with the entirety of or a predominance of state shares in the reformed SOEs, there is only a façade of corporate governance structure similar to that found in Anglo-American models. The result is a lack of an effective corporate governance system and a continued inefficient principal-agent relationship. In combination with the immaturity of the stock market system, an absence of a hostile take-over market and the lack of a professional manager market in China, it is probably not surprising that this poorly installed governance model has failed to revive the corporatised SOEs studied. While QDH registered a steady growth in the 1990s, the case study shows that the success of this firm was due more to its powerful manager, M than to the process of corporatisation. Broadly speaking, there was no fundamental change in the institutional arrangements after the firms were corporatised.

Since in general the incorporated SOEs studied have continued to operate in an institutional environment similar to that found in traditional SOEs in China, the relationship among government agencies, the firms and state banks, observed in traditional SOEs, continues to prevail in most of the corporations studied. Administrative intervention still impacts on the appointment of top managers, the business objectives of most of the firms and in making important investment decisions. Soft bank loans continue to flow into the corporations, in spite of rising debt levels. The prevalent paternalistic relationship between superior authorities and the firms has protected most of the firms from the full effects of market competition and, therefore, have handicapped them from developing the necessary resources to gain competitive advantage in a market environment. As a result, most of the corporatised SOEs studied still rely mainly on bureaucratic mechanisms for coordinating their activities.

There was no obvious distinction between the behaviour of most of the corporations and the unreformed SOEs studied in Chapter 6. Although there was some evidence that the corporations had rationalised their organisational structures, introduced contractual employment and streamlined their workforces, these changes seem to have been associated more with general economic changes in China in the 1990s than with the MES specifically. This is borne out by the fact that these changes also happened in the traditional SOEs and some of the non-state firms studied.

Developments that seem to have been associated with the MES are the criteria used to evaluate the performance of management and the more frequent use of an annual salary system when remunerating top managers. Performance evaluations for top managers in the corporations studied were not confined to assessing the quality of Party cadre; the business performance of the firms had become the main criteria, in terms of profit levels and increasing the value of state-owned assets. The annual salary system, which was designed to link management remuneration with the performance evaluation results, was expected to provide performance incentives to the managers. However, as reflected in the discussion in this chapter, the effect of these incentive measures is limited by the imbalance between the managers' responsibilities and their authority. Frequent government interventions severely weaken management autonomy. Meanwhile, management pay seems to remain very loosely connected to individual performance. Also, since government agencies still employ the practice of transferring bureaucratic cadres among state firms, failing to improve the firm's performance does not appear to impose severe negative consequences for the careers of managers, at least in the firms studied. All in all, the unimproved practices in management appointments and remuneration seem to have eliminated the potential effects of other and positive changes happening within the firms as a result of the MES, for example more business related criteria used for performance evaluation.

The experience of QDH, a wholly state-owned corporation, stands out in contrast to the other corporations studied here. Many effective management practices similar to those found in some of the non-state firms studied (Chapters 7 and 8) were observed in this firm. However, state firms like QDH may be rare in China and the better management and better performance of the firm have to be considered in the context of its development. Unlike the other corporations studied, which had received attention and extensive financial support from government agencies since their establishment, QDH always had a looser relationship with government. Receiving little direct technical and financial support from government in its early years, the management of QDH learnt to depend on the firm's own resources. This looser connection with government not only meant that QDH was dependent for its success on the market to a greater degree than the other corporations studied, but it also helped the formation of a culture in QDH of rejecting administrative intervention in business decisions. Such a culture was later reinforced by the firm's powerful manager, Mr Zhou, who treated the firm as if he were the owner.

It is clear that the differences between QDH and the other corporations studied were not the direct result of the MES, but rather of the ways of thinking and doing things developed under an environment based historically on much looser relationships with government agencies and a greater exposure to market competition. In addition, Hambrick and Finkelstein (1987) argue that (provided that there are effective mechanisms to check agency problems) the effectiveness of an executive is closely associated with the discretion available to him/her, which is, in turn, determined by the operating environment of the firm. The case of QDH confirms that management autonomy from government agencies increases the role of senior managers in influencing organisational outcomes. In QDH the loose relationship with government led to the decisive power of the management over business affairs; while in the other corporations studied, frequent and heavy administrative intervention continued to limit management autonomy. As a result, on the one hand the senior managers in these corporations seemed powerless when it came to improving the firms' performance, and, on the other, the firms suffered severe agency problems due to a lack of effective governance mechanisms. State firms like QDH may be rare. The success of QDH in the 1990s seems due more to its looser relationship with government and the leadership of who, unlike most managers in Chinese state firms, manages the firm as if he owns the assets.

The discussion in this chapter has been based on only five reformed SOEs and it is difficult, therefore, to generalize the results across the entire Chinese Economy. However, as suggested by some other researchers (for example, Broadman, 1999; Zhou and Zhang, 1999), most reformed SOEs in China, like the other four corporations studied in this chapter, still behave bureaucratically, like their unreformed counterparts. Another bias of the case studies in this chapter is a relatively heavy presence of wholly state-owned corporations in the sample. This means that the main arguments of the chapter are open to the criticism that the continuous heavy government intervention observed is due to the existence of exclusive or dominant state equities. However, similar observations have also been made in studies of other listed joint stock companies (for example, Xu and Wang, 1997; Tam, 1999; Chen, 2001; Lin, 2001). Nevertheless, further research across more industries and more enterprises is needed to obtain a broader picture of the behaviour of China's corporatised state firms.

10. Conclusions

10.1 Introduction

Since 1979, China has introduced a series of reforms that has gradually dismantled the central planning system and has introduced market elements into the economy. The management of SOEs have been granted some autonomy, especially over the issues of production and prices. Meanwhile, non-state firms, which compete in the emerging market of China, have been developing quickly and therefore have applied competitive pressure on the SOEs. In the second half of the 1980s, the Contract Management Responsibility System (CMRS) was implemented in state firms across China. The main purpose of this reform was to increase productivity without changing state ownership, by way of separating the ownership of state assets from the management of the firms. However, there were serious agency problems embedded in the CMRS and this reform measure seems to have failed to improve the performance of SOEs as a whole (Lin, 1995; Xu, 1997). After 1993, China launched a new round of economic reform. The so-called Modern Enterprise System (MES) has been experimented with in chosen SOEs, with the intention of revitalising the state sector by transforming SOEs into economic entities with clearly defined property rights and improved corporate governance.

The study reported in this thesis explores the effects of China's new round of economic reform, especially the MES, on state firms. The central question of the research is whether the new reform measures of the 1990s have transformed state-owned enterprises into commercial entities operating according to market signals, as intended by the government. In order to address this question, evidence was drawn from firms in the Chinese Electronics Industry (CEI). To obtain a full understanding of the effects of economic reform on state firms, both non-state firms and SOEs were included in the research. More specifically, four types of ownership form were studied, namely unreformed SOEs, collectives, joint ventures[13] and corporatised SOEs[14]. The

[13] In the analysis of Chapter 4 and of Chapter 5, joint ventures and wholly foreign owned firms were studied together, as labelled 'joint ventures'; while only joint ventures were involved in the in-depth cases studies reported in Chapter 8.

intention was to make a comparison not only between unreformed and incorporated SOEs but also between state firms as a whole with non-state firms.

The central research question of the thesis was explored by combining a statistical analysis, based on published, official data, with an analysis of results from a questionnaire survey and a series of case studies. After a review of the development of the Chinese economy and the historical background of Chinese SOEs, set out in Chapter 2, a theoretical framework for the empirical work was developed in Chapter 3. The thesis then turned to a brief historical overview of the CEI and a comparative analysis of productivity between firms with different ownership forms in the industry was presented. In Chapter 5, data from a questionnaire survey were analysed to provide a general understanding of management and organisational issues in firms of the CEI in the new reform era. In Chapters 6 to 9, 17 firms in the CEI, which were categorised into four groups according to their ownership forms, were studied. The discussion in the case studies involved consideration of both the firms' external relations and their management and organisational practices. The study concluded by assessing how the new economic reform measures in China in the 1990s have impacted on the behaviour and management practices of SOEs in the CEI in the direction of becoming market players.

In the next section of this chapter, the theoretical framework used in this thesis and the main findings from the empirical work are summarised.

10.2 The Theoretical Framework and Main Findings

In Chapter 3, a theoretical framework was developed after reviewing theories relevant to understanding socialist economies and socialist enterprises. The review began with some studies critiquing socialist economies, including those revealing the unscientific foundation of central planning and Kornai's political economic theory of the socialist system. Attention then turned to institutional economic theories, which can arguably

[14] Because of the use of Chinese official data for the statistical analysis reported in Chapter 4, it is not possible to separate limited liability companies transformed from former SOEs from those with other origins. However, in the analysis of the data from the questionnaire survey and interviews with managers of the selected firms, corporatised SOE have been singled to see the effects of the MES on the behaviour of the firms.

provide insight into the problems of state firms in a socialist economy. From the discussion, it was argued that the institutional arrangements under which a firm operates are important in shaping the firm's behaviour, or more correctly, the behaviour of the firm's management. Institutional arrangements, which refer not only to the structure of property rights over a firm's assets but to the corporate governance or the 'broader' enterprise governance as well, shape interactions between transacting participants by providing incentives and constraints (North, 1990, p.3). Therefore, property rights theory and the theory of corporate governance were used in this study to explain the source of problems in Chinese SOEs and the variance in behaviour across different ownership forms. In order to examine changes in firms' behaviour and management practices as a result of alteration, if any, in the institutional environment, six management and organisational issues identified by Parker (1993, 1995) were used as guidance on where changes within Chinese state firms might occur.

Based on this theoretical framework, the central research question was addressed through three sub-questions. The **first** one was whether there had been a fundamental change in the institutional environment of state firms, as a result of the economic reforms from 1993, especially the MES. **Second**, what kind of co-ordination mechanism was used by the firms after more market elements had been introduced into the Chinese economy in the 1990s? **Finally**, had changes in the external environment led the state firms to introduce organisational structures and management practices more tailored to business needs?

According to the statistical analysis reported in Chapter 4, the evidence suggests that in the mid to late 1990s the performance of the state sector in the CEI, as a whole, were less impressive than performance in non-state firms; although the official data did not allow us to distinguish the corporations with SOE origins from the other limited liability companies. The earlier dominant position of SOEs in the CEI, in terms of their share of gross value of industrial output (GVIO), was overtaken by joint ventures and wholly foreign owned firms. The outperformance of state firms by non-state enterprises is more obvious when it comes to productivity growth. In terms of labour productivity growth, traditional SOEs were less efficient than collectives and joint ventures and wholly foreign owned firms. Limited liability companies in the CEI began with a high labour productivity, but afterwards registered the lowest growth rate among the four ownership types. In terms of total factor productivity (TFP) growth over the period from 1995 to 1999, the collective sector was the most dynamic in the CEI, followed by joint ventures and wholly foreign owned firms. The TFP growth in the state sector as a whole was much lesser impressive than in the non-state firms. Traditional SOEs registered the lowest TFP growth among the four ownership types studied and the limited liability sector recorded only a slightly higher increase rate of TFP in the second half of the 1990s. Considering the negligible discrepancy in TFP growth between the two ownership types and the fact that at least a half of the limited liability sector in the CEI is made up of corporations transformed from former, better-performing SOEs, the results suggest that the MES has so far failed to improve significantly multi-factor productivity in corporatised SOEs.

Quantitative work based on aggregate industry-level data can provide, however, only a broad insight into changes in the CEI following the MES and other reform measures. To provide much more detail on the nature of the changes in the CEI and their impact, firm-level data were collected on management behaviour, internal organisation and external relations. Chapters 5 to 9 reported empirical results based on data collected during my fieldwork in China in early 2000. The findings from the questionnaire survey, presented in Chapter 5, and those from the enterprise case studies in Chapters 6 to 9 are in accordance with and complementary to each other. These chapters examined firms' external relations, namely the relations with government agencies, with banks and with the market; and firms' practices in the areas of organisational structure, management appointment and remuneration, and employment. The findings and their relevance to answering the central research question and the three sub-questions are now summarised.

10.2.1 External Relations

The study of firms' external relations was intended to see how far the new round of economic reform, especially the MES, had changed the institutional environment in which firms in the CEI operate.

Before 1979 and in the early stages of economic reform, SOEs were production units, subordinated to various government agencies. When economic reform deepened in China, some autonomy was granted to the management of state firms, which was later officially enlarged and enforced by regulations and policies issued in the 1990s. However, evidence from the empirical work in the study, especially the case studies, has shown that, in the new reform era, there was still heavy administrative intervention in the SOEs, even though some of the state firms had been corporatised and various government agencies had been streamlined. Major top managers in the state firms studied were still appointed by supervisory bureaux and usually were chosen from the 'cadre bank' of the higher authority. Administrative intervention was also obvious in setting the management's objectives, investment decisions and deciding on changes of business lines. Furthermore, government agencies continued to arrange mergers between state firms.

Although boards of directors have been established in incorporated state firms, this layer of structure does not seem to have provided a cushion between government agencies and the corporations. With a heavy presence of government officials on the boards and the continued bureaucratic way of appointing senior managers, boards of directors in the state corporations discussed do not seem to have functioned as an effective governance structure to check agency problems among the managers. Rather, it appears that the boards were another platform for administrative interference. The empirical evidence presented in the study demonstrates that, like traditional SOEs, corporatised SOEs in the CEI are still not immune from government intervention. In spite of nominally full, legal entity status, many officially granted autonomous rights, especially related to property rights and ownership, are not exercised by the incorporated SOEs.

The research also revealed that government agencies also continue to play a very important role in interaction between state firms and state banks. With the deepening of the reform of the banking system in China in the 1990s, there was a strengthening of the budget constraints, especially for relatively smaller SOEs. However, the practice of funding investment projects with government as a facilitator had not been stopped in the state firms studied. The process of commercialising state banks is constantly interrupted by various campaigns initiated by government and the banks continue to issue loans passively to SOEs, no matter the firms' financial condition. The result is large amounts of unrepaid loans, as observed in the traditional SOEs and most of the state corporations studied. Ironically enough, the SOEs corporatised under the MES, an objective of which is an improved governance structure, seem to have found it easier to access policy loans and, therefore, have softer budget constraints than traditional SOEs. This tends to provide disincentives for management of state corporations to improve the enterprises' performance following corporatisation.

With more and more market elements introduced into China's economy, the direct involvement of government in pricing and organising transactions between state firms had diminished and, in most cases, had been eliminated by 1999. However, the research suggests that market competition has so far been imposed more on non-state firms than on the SOEs. The traditional and most of the corporatised SOEs studied in this thesis were still protected by government agencies from the full effects of market competition. In addition, inadequate exposure to market competition seems to continue to handicap state firms, both unreformed and corporatised, from developing the necessary resources to gain competitive advantage in the marketplace. This is evidenced by the failure of the traditional SOEs and most of the corporations studied to respond appropriately when the market condition turned hostile in the 1990s.

In summary, the property rights relations in the state firms studied remained blurred in the 1990s, even though some of them had been corporatised and some even had multiple investors. The state controls all of the equity in the case of wholly state-owned corporations and the majority of the shares of other state companies. However, the property right relations involved in the state-owned equities or shares remain unclear. This means, in essence, there is no real difference in the ownership of the firms after corporatisation and no evidence of an improved principal-agent relationship. At the same time, the enterprise/corporate[15] governance arrangements have so far shown no sign of a fundamental change under the MES and the other reform measures. There are boards of directors in corporations, but in reality they do

[15] The relation between corporate governance and enterprise governance was discussed in Chapter 3.

not seem to function as an effective corporate governance arrangement. Also, there is still a lack in the state sector of other enterprise/corporate governance arrangements, such as powerful capital and debt markets, the threat of hostile takeovers and bankruptcy and a well-functioning professional manager market, which might play effectively 'incentive' and 'selection' roles. Instead, the empirical work shows that, in the absence of effective enterprise/corporate governance mechanisms, government agencies still serve as major coordinators of state firms' external relations. In the second half of the 1990s a paternalistic relationship with government agencies still prevailed in the traditional and most of the incorporated SOEs studied and in turn government played a central role in the relationships of the firms with banks and the market. Supervisory bureaux continued to facilitate soft bank loans to the state firms. They also still appointed senior managers of the firms, both corporatised and non-corporatised, from their cadre banks instead of by using the professional manager market. Unlike some of the non-state sectors studied, where firms' survival was determined mainly by the 'nature selection' of the market, it seems that the fate of most of the SOEs, both traditional and corporatised, continued to be in the hands of government. The shift of business lines, the closure of businesses, and mergers and takeovers among the firms were decided by, or at least, approved by higher authorities. It appears that these decisions were made more for political reasons than out of economic concerns.

The research provided answers to the first and the second sub research questions. Evidence in this study shows that the new round of economic reform in China, especially the MES, seems to have failed to clarify the property rights in and improve the enterprise/corporate governance of state firms. There appears so far to be virtually no fundamental difference in the institutional environment between the corporatised and traditional SOEs; nor does there seem to have been real change over time in the institutional arrangements of the state sector as a whole. In an essentially unchanged institutional environment, the research suggests that the activities of both corporatised and non-reformed SOEs continue to be coordinated mainly by bureaucratic mechanisms

The following discussion of the findings concerning management practices of SOEs provides the answer to the third sub-research question.

10.2.2 Changes in Organisation and Management within Firms

Evidence presented in this research shows that there have been some, but limited, effects of the new round of economic reform on the internal management practices of state firms in the CEI. In the second half of the 1990s, the management of the state firms studied showed more market-orientation in their objectives, streamlined the firms' organisational structures, and laid off some of the redundant employees. However, these changes were not thorough in two senses. Firstly, as a whole, behaviour in these areas in the state firms (traditional and corporatised) studied remained less business-oriented, compared with the non-state firms reviewed. The corporatised and the non-reformed SOEs discussed still put great attention on non-business objectives assigned by government agencies. Although in the mid and late 1990s there was organisational restructuring and labour rationalisation in the state sector, most of the SOEs studied continued to have more 'non-productive' departments and suffered more from overmanning than most of the non-state firms discussed. Although contract employment was implemented for all 'formal' employees, the use of contracts with a non-fixed term remained extensive and the terms of fixed-period contracts were usually longer in the state firms than in the non-state firms. In addition, there was a much less frequent and less extensive use of temporary workers in the state firms than in most of the non-state firms studied. As a result, the workforces in the state firms remained inflexible and were more difficult to adjust to business needs.

Secondly, it seems that these changes in the state firms were initiated by government rather than the firms' management. Major organisational restructuring and labour rationalisation in most of the corporatised SOEs was conducted during the same period as in the non-reformed state firms. This suggests that these changes resulted from general economic changes in China, the direction and pace of which is usually controlled by the government, rather than directly from the implementation of the MES. Furthermore, the study has shown that corporatisation in China did not necessarily lead to a better matching between organisational structures and business needs.

During the period covered by the research, there were few personnel changes at senior management level in the traditional SOEs studied. Most of the top managers remained in their posts, in spite of the worsening performance of their firms. In the corporatised SOEs reviewed, most of the major pre-corporation managers took up the same posts post-corporatisation. Although there were more frequent personnel changes in the CEO position in the corporations having continuing deteriorating performance, most of the dismissed managers either retired or were transferred to similar posts in other SOEs or in government agencies. This practice of repositioning the dismissed managers, which was also common in the traditional SOEs, can be expected to have weakened the incentive for senior managers to revitalise their enterprises.

In both the traditional SOEs and most of the state corporations studied, business targets were loosely controlled and internal incentive mechanisms were poorly designed. In the traditional SOEs, managers at various levels were still evaluated as Party cadres and according to vague and sometimes contradictory criteria. Management remuneration was not linked to individual performance. Although business-related criteria, such as the profit level and an increase in state-owned assets, were used to evaluate the performance of senior managers in the incorporated SOEs studied, and in most of the firms an annual salary system had been introduced to compensate the top managers, it seems that these measures still failed to provide effective managerial incentives. Because of continued soft loans and frequent administrative intervention, the performance of managers in the corporations could not be evaluated objectively and accurately. Consequently, the annual salary system lost most of its incentive effects because there was no appropriate basis on which to link managerial remuneration to individual performance. The evidence of the study also shows that the link between remuneration and individual performance remained absent for middle managers and other employees in the traditional and most of the reformed SOEs discussed.

In summary, the research found that the reforms only led to limited changes in the internal management behavior of state firms in the CEI in the second half of the 1990s. Although some state firms had been corporatised under the MES, because there had been little fundamental change in the firms' institutional environment, management practices in the state sector in the CEI generally remained unchanged. That is to say, and in answer to the third sub-question, the MES and other new reform measures appear, so far, to have failed to lead state firms to introduce organisational structures and management practices more tailored to business needs.

Combining the findings of the empirical work and the answers to the three sub-questions, the central research question now can be answered:
The research has led to the conclusion that the new round of economic reform in the 1990s, including the MES, has so far failed to change SOEs into commercial entities operating according to market signals, as intended.

10.3 Policy Implications

The study presented in this thesis suggests that the Chinese economic reforms after 1993 had limited impact on the behaviour of the state firms studied. The inability of new reform measures, especially the MES, to revitalise these state firms, lies in their failure to transform the institutional environment in which the firms operate. Property rights in these firms have not been clarified and corporate/enterprise governance has not been improved. Tackling these problems presents a huge policy challenge in China because these issues are so complex and interrelated and no single component can be dealt with in isolation. Based on the findings of this research, however, some policy implications are given below.

Firstly, further ownership reform should be conducted. This means that the ownership of state-owned enterprises should be diversified and the dominance of state shares should be removed. As shown in this research, dominant state ownership in Chinese SOEs tends to blur the line of responsibility between government and the management. This has provided grounds for continued administrative intervention. By removing the dominance of state shareholdings, the problem should be reduced, at least.

Secondly, effective corporate governance or enterprise governance should be established and enforced. Boards of directors that are independent of government should be established in corporations through, for example, excluding government officials from the boards, appointing independent directors and introducing cross-directorship among corporations. Establishing effective corporate/enterprise governance also means reforms in other areas of the economy. For instance, reform of the Chinese financial system, especially the state-banking system, should be deepened and quickened. This calls for the commercialisation of state banks and the stopping of policy loans to state firms. As an important governance mechanism, a market for corporate control through merger and acquisition should be fostered. This means that mergers and acquisitions are transacted through competitive forces rather than being arranged by government. In addition, the practice of appointing senior managers of state firms from the cadre banks of government agencies should be ended. Instead, competitive markets for managers should be established and used for management appointments in the firms.

It should be stressed that ownership reform and the establishment of effective corporate/enterprise governance should be conducted 'hand-in-hand' because the two issues are interrelated. Clearly-defined property rights as a result of further ownership reform in the state sector need enforcement and protection through effective corporate/enterprise governance mechanisms, so as to ensure that economic efficiency is promoted by private property rights.

10.4 Limitations of the study and Suggestions for Future Research

It is important to emphasise that there are a number of possible limitations to the research presented in this thesis. Firstly, the evidence used in this study came from a single industry in China, the CEI. This means that the findings based on this industry may not be applicable to other parts of the economy. However, the results reported are consistent with other and earlier studies of the impact of reforms during the 1990s (for example, Chen, 1998; Perotti, *et al.*, 1999; also see Chapter 1), which suggests that they may have wide implications. Secondly, the statistical analysis in Chapter 4 was based on data from the CEI Ministry. Chinese official data may not be entirely reliable. In addition, the data used to compare productivity across ownership types involved only a short time period because of data limitations. Thirdly, the response rate to the questionnaire survey was low. Therefore, it was not possible to conduct a formal statistical analysis based on the data. Fourthly, the sample used for the case studies was highly regionalised. The results may not, therefore, be representative of enterprises elsewhere in China, especially in the less developed regions of the economy. Fifthly, there was a bias towards wholly state-owned corporations in the case studies. Whether the experiences of the corporations studied in this research are simply limited to wholly state-owned corporations or have wider reference in China's corporatised state sector is a subject worthy of further research.

In the light of the limitations mentioned above, further research should be conducted in the following directions. Firstly, a statistical analysis of firms' performance should be undertaken based on data with broader industry coverage and a longer time period. If possible, firm-level data should be used for comparisons of productivity; although it remains difficult to obtain this type of data in China. Secondly, empirical studies, on the basis of questionnaire surveys and interviews with critical informants, should address a sample of firms in other industrial sectors and other geographical regions in the economy, in order to provide a cross-check on the findings of this study. Finally, the situation in China changes fast. There will, therefore, be an obvious need to carry out a series of follow-up studies to update the data and modify the arguments, where appropriate.

Appendices:

The appendices are numbered to relate to the chapters they are attached to. For example, Appendix 4.1 refers the first appendix to Chapter 4.

Appendix 4.1: The Sub-industries in the CEI

There are nine sub-industries in the CEI, according to *The Yearbook of the Chinese Electronics Industry*. They are:

Radar sub-industry
Telecommunication equipment sub-industry
TV and broadcasting equipment sub-industry
Computer sub-industry
Electronics component sub-industry
Electronics measuring appliance sub-industry
Electronics specific equipment sub-industry
Household electronic device and instrument sub-industry
Electronics device sub-industry

Appendix 4.2: Details of the Equation Transformation

The logarithm form of the Cobb-Douglas production function is specified as follows:

$$q_i = \alpha_O + \alpha_K k_i + \alpha_L l_i + \varepsilon_i \qquad (1).$$

If l_i is subtracted from both side of the equation, the result is:

$$q_i - l_i = \alpha_O + \alpha_K k_i + \alpha_L l_i + \varepsilon_i - l_i \qquad (1)\text{-}1.$$

Equation (1)-1 can be transformed into the following forms:

$$q_i - l_i = \alpha_O + \alpha_K (k_i - l_i) + \varepsilon_i - (1 - \alpha_K - \alpha_L) l_i \qquad (1)\text{-}2;$$

$$q_i - (\alpha_K + \alpha_L) l_i = \alpha_O + \alpha_K (k_i - l_i) + \varepsilon_i \qquad (1)\text{-}3;$$

$$(\alpha_K + \alpha_L)(q_i - l_i) - (\alpha_K + \alpha_L - 1) q_i = \alpha_O + \alpha_K (k_i - l_i) + \varepsilon_i \qquad (1)\text{-}4;$$

$$(q_i - l_i) = \frac{\alpha_O}{\alpha_K + \alpha_L} + \frac{\alpha_K}{\alpha_K + \alpha_L}(k_i - l_i) + \frac{\alpha_K + \alpha_L - 1}{\alpha_K + \alpha_L} q_i + \frac{\varepsilon_i}{\alpha_K + \alpha_L} \qquad (1)\text{-}5.$$

If we let σ equal $\alpha_K + \alpha_L$; β equal $\frac{\alpha_K + \alpha_L - 1}{\alpha_K + \alpha_L}$, or $\frac{\sigma - 1}{\sigma}$; α_k equal $\frac{\alpha_K}{\sigma}$; α_o equal $\frac{\alpha_O}{\sigma}$; and e_i equal $\frac{\varepsilon}{\sigma}$, equation (1)-5 is transformed into:

$$q_i - l_i = \alpha_o + \alpha_k (k_i - l_i) + \beta q_i + e_i \qquad (2)$$

Appendix 4.3: The Process of Data Transformation in the Face of the Durbin-Watson Problem

Initial estimation of equation (2) in the text yielded results shown in Tables 4A.1, 4A.2, 4A.3 and 4A.4.

Table 4A.1 Initial Estimation Results (SOEs)

Total panel of observations 128

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	-1.031888	0.102885	-10.03000	0.0000
k-l(α_k)	0.837566	0.101856	8.222991	0.0000
q(β)	0.102167	0.006214	16.45295	0.0000
R-squared	0.853975	Prob(F-statistic)		0.000000
Adjusted R-squared	0.851639	Durbin-Watson statistic		0.346567
F-statistic	365.5088			

Table 4A.2 Initial Estimation Results (Collectives)

Total panel of observations 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	-0.303543	0.061532	-4.933088	0.0000
k-l(α_k)	0.777907	0.955295	0.814311	0.4173
q(β)	0.147974	0.009668	15.30536	0.0000
R-squared	0.858402	Prob(F-statistic)		0.000000
Adjusted R-squared	0.855756	Durbin-Watson statistic		0.274699
F-statistic	324.3310			

Table 4A.3 Initial Estimation Results (Joint Ventures)

Total panel of observations 118

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	0.574311	2.953573	0.194446	0.8462
k-l(α_k)	0.799742	0.188147	4.250628	0.0000
q(β)	0.082472	0.005344	15.43145	0.0000
R-squared	0.825187	Prob(F-statistic)		0.000000
Adjusted R-squared	0.822147	Durbin-Watson statistic		0.560069
F-statistic	271.4237			

Table 4A.4 initial Estimation Results (Limited Liability Companies)

Total panel of observations 109

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant (α_o)	0.222398	1.105610	0.201155	0.8410
k-l(α_k)	0.788370	0.193964	4.064512	0.0001
q(β)	0.075247	0.013005	5.786132	0.0000
R-squared	0.508335	Prob(F-statistic)		0.000000
Adjusted R-squared	0.499059	Durbin-Watson statistic		0.408346
F-statistic	54.79708			

Since the Durbin-Watson statistic in all the estimations were less than d_L at one percent level of significance, the data may suffer from the problem of autocorrelation.

In order to derive efficient estimates of α_k and β, the data needed transforming. With the value of *d*, an estimate of ρ can be obtained using the following expression:

$$\hat{\rho} = \frac{N^2(1-d/2)+k^2}{N^2+k^2},$$

Where *N* is the number of observations and *k* is the number of coefficients (including the intercept). For example, ρ in the case of SOEs is

$$\hat{\rho} = \frac{(128)^2(1-0.346567/2)+3^2}{128^2+3^2} = 0.82772$$

Using this estimate, data were transformed as ($(q-l)_{it} - \hat{\rho}(q-l)_{i(t-1)}$), ($q_{it} - \hat{\rho}\, q_{i(t-1)}$), and ($(k-l)_{it} - \hat{\rho}(k-l)_{i(t-1)}$); the first observations were transformed as $\sqrt{(1-\hat{\rho}^2)}\ (q-l)_{i1}$, $\sqrt{(1-\hat{\rho}^2)}\ q_{i1}$ and $\sqrt{(1-\hat{\rho}^2)}\ (k-l)_{i1}$. With the transformed data, estimations were conducted again, using equation (2). The results of new estimation are shown in Tables 4.7, 4.8, 4.9 and 4.10 in the main body of the text.

APPENDIX 5.1 Questionnaire

Please tick the parenthesis before the choice you think appropriate. If you don't know the situation five years ago accurately, please leave blank.

I. GENERAL INFORMATION

1. What is the name of your firm?____________________________

2. What is(are) the main product(s) of your firm? ________________________

3. Roughly how many employees are there in your firm? ______________

4. What was the size of your firm in 1999 and in 1994?

*The size in 1999
( ) A. large (total sales and capital over 500 million Yuan)
( ) B. medium (total sales and capital between 50 million and 500 million Yuan)
( ) C. small (total sales and capital less than 50 million Yuan)

*The size in 1994
( ) A. large (total sales and capital over 500 million Yuan)
( ) B. medium (total sales and capital between 50 million and 500 million Yuan)
( ) C. small (total sales and capital less than 50 million Yuan)

5. Which of the following economic types was your firm in 1999 and in 1994?

*The type in 1999
( ) A. traditional SOE
( ) B. joint venture
( ) C. collective
( ) D. joint stock company
( ) E. other limited liability company
( ) F. wholly owned foreign firm
( ) G. other (please state)______

*The type in 1994
( ) A. traditional SOE
( ) B. joint venture
( ) C. collective
( ) D. joint stock company
( ) E. other limited liability company
( ) F. wholly owned foreign firm
( ) G. other (please state)______

6. Which authority level was your enterprise subordinate to in 1999 and in 1994?

*The situation in 1999
( ) A. Central government
( ) B. provincial government
( ) C. municipal government
( ) D. county government
( ) E. We are not accountable to any government agencies

*The situation in 1994
( ) A. Central government
( ) B. provincial government
( ) C. municipal government
( ) D. county government
( ) E. We are not accountable to any government agencies

II. THE OBJECTIVES OF THE FIRM

7. What were the three most important objectives of your firm in 1999 and in 1994? (Please fill the numbers in the boxes before the appropriate choices, 1 for the most important one, 2 for the second most important and 3 for the third most important.)

*The situation in 1999
( ) A. increase output volumes
( ) B. increase profits
( ) C. maintain good relations with local people

( ) D. increase the salary of employees
( ) E. accomplish contracted tasks laid down in the management contract
( ) F. fulfil the goals set by upper bureau not written in the contract
( ) G. utilise local labour resources
( ) H. other (please state) _________

*The situation in 1994
( ) A. increase output volumes
( ) B. increase profits
( ) C. maintain good relations with local people
( ) D. increase the salary of employees
( ) E. accomplish contracted tasks laid down in the management contract
( ) F. fulfil the goals set by upper bureau not written in the contract
( ) G. utilise local labour resources
( ) H. other (please state) _________

III. ORGANISATIONAL STRUCTURE

8. Have there been any changes in the number of administrative levels within the firm since 1994?
( ) A. Yes, we have increased one level
( ) B. Yes, we have increased two levels
( ) C. Yes, we have increased more than two levels
( ) D. Yes, we have decreased one level
( ) E. Yes, we have decreased two levels
( ) F. Yes, we have decreased more than two levels
( ) G. No, there have been no any changes at all

9. Which three departments do you think were most crucial to the survival and further development of your firm in 1999 and in 1994? (Please fill the numbers in the boxes before appropriate choices, with 1 for the first most crucial, 2 for the second most crucial and 3 for the third most crucial.)
*The situation in 1999
( ) A. the production department
( ) B. the marketing department
( ) C. the research and development department
( ) D. the purchasing department
( ) E. the accounting and finance department
( ) F. the personnel department
( ) G. other (please state)________

*the situation in 1994
( ) A. the production department
( ) B. the marketing department
( ) C. the research and development department
( ) D. the purchasing department
( ) E. the accounting and finance department
( ) F. the personnel department
( ) G. other (please state)________

10. Which three departments in your firm were consulted with the highest frequency when making strategic decisions? (Please fill the numbers in the boxes before the appropriate choices, with 1 for the one consulted with the first highest frequency, 2 for the second highest and 3 for the third highest.)
( ) A. the production department
( ) B. the marketing department
( ) C. the research and development department
( ) D. the purchasing department
( ) E. the accounting and finance department
( ) F. the personnel department
( ) G. other (please state)

The following three sub-questions are to be answered only by *limited liability/joint stock companies*. Other respondents please move to the next question, question 12.

11(a). How many members of the board of directors have positions in the Party organs of the firm?
( ) A. none
( ) B. one
( ) C. two
( ) D. three
( ) E. four
( ) F. five
( ) G. six
( ) H. over six

11(b). How many members of the board of directors come from outside of the firm?
( ) A. none
( ) B. one
( ) C. two
( ) D. three
( ) E. more than three

11(c).What kind of share is dominant in the ownership structure of your firm?
( ) A. state share
( ) B. institutional share
( ) C. domestic individual share
( ) D. other (please specify)____________

IV. COMMUNICATION

12. Which three items were involved in the content of contacts made by you (senior mangers) to lower levels in the firm's hierarchy with the highest frequency? (Please fill the numbers in the boxes before appropriate choices, with 1 for the one with the first highest frequency, 2 for the second highest frequency and three for the third highest frequency.)
( ) A. non-business related government policies and regulations
( ) B. other non-business related information (including social welfare)

( ) C. business related government policies and regulations
( ) D. other business related information from government
( ) E. instructions on non-business related affairs (including social welfare) that subordinates have asked for
( ) F instructions on business related affairs that the subordinates have asked for
( ) G. decision made by you and other top managers on non-business related affairs (including social welfare)
( ) H. decisions made by you and other top managers on business related affairs
( ) I. other (please state) _______

13. Which three items were involved in the content of contacts made by the lower levels of the firm to you (senior managers) with the highest frequency? (Please fill the numbers in the boxes before appropriate choices, with 1 for the one with the first highest frequency, 2 for the second highest frequency and three for the third highest frequency.)
( ) A asking for instructions about non-business related affairs (including social welfare affairs)
( ) B asking for instructions about business related affairs
( ) C. routine operational reports
( ) D. decisions made by lower level on non-business related affairs (including social welfare)
( ) E. decisions made by lower levels of the firm on business related affairs
( ) F. other (please state) ________

V. MANAGEMENT

(For joint ventures and wholly foreign owned firms, the questions in this section apply only to the Chinese partner(s).)

14. How many senior managers (those above the department managers) were members of the Communist Party in 1999 and in 1994?

* The situation in 1999
( ) A. all of them
( ) B. more than 50%
( ) C. 20%--50%
( ) D. less than 20%
( ) E. none

* the situation in 1994
( ) A. all of them
( ) B. more than 50%
( ) C. 20%--50%
( ) D. less than 20%
( ) E. none

15. What was the proportion of senior managers appointed by government agencies in 1999 and in 1994?

*The situation in
( ) A. none
( ) B. <=10%
( ) C. 11%--25%
( ) D. 26%--50%
( ) E. 51%--80%
( ) F. >=81%

*the situation in 1994
( ) A. none
( ) B. <=10%
( ) C. 11%--25%
( ) D. 26%--50%
( ) E. 51%--80%
( ) F. >=81%

16. What was the proportion of the middle managers whose appointment could be determined by the top management without upper government agencies being informed, in 1999 and in 1994?

*The situation in 1999
( ) A. <=20%
( ) B. 21%--50%
( ) C. 51%--80%
( ) D. 81%--99%
( ) E. 100%

*the situation in 1994
( ) A. <=20%
( ) B. 21%--50%
( ) C. 51%--80%
( ) D. 81%--99%
( ) E. 100%

17. What were the highest and lowest education certificates held by the managers at or above the department manager grade?

*the highest education certification
( ) A PhD
( ) B Master degree
( ) C Bachelor degree or diploma
( ) D high school certificate
( ) E certificate below high school

*the lowest education certification
( ) A PhD
( ) B Master degree
( ) C Bachelor degree or diploma
( ) D high school certificate
( ) E certificate below high school

18. How many senior management positions have there been in the firm whose incumbents have been changed since 1994 (not including the cases of retirement)?
( ) A. none
( ) B. <=10%
( ) C. 11%--25%
( ) D. 26%--50%
( ) E. 51%--80%
( ) F. >=81%

VI. LABOUR

19. What was the proportion of employees employed on the basis of the contract employment system in 1999 and in 1994?

*The situation in 1999
( ) A. <=30%
( ) B. 31%--50%
( ) C. 51%--80%
( ) D. 81-99%
( ) E. 100%

*the situation in 1994
( ) A. <=30%
( ) B. 31%--50%
( ) C. 51%--80%
( ) D. 81-99%
( ) E. 100%

20. What was the proportion of the workforce that had been involved in labour rationalisation between 1994 and 1999?
( ) A. 0%
( ) B. <=10%
( ) C. 11%--30%
( ) D. 31%--50%
( ) D. 51%--70%
( ) E. >=71%

21. Do you have problems of overmanning or insufficient employment?
*Shortage *Balance *Overmanning

( ) ( ) ( ) A management staff
( ) ( ) ( ) B technician
( ) ( ) ( ) C skilled workers
( ) ( ) ( ) D support staff

22. Have any employees been dismissed (not including the streamlined employees) since 1994?

( ) A. yes, (Will you please indicate roughly how many? ______________)
( ) B. no

VII. INVESTMENT AND TECHNOLOGY

23. Which three sources have provided most of the funds for investment projects conducted by your firm since 1994? (Please fill the numbers in the boxes before the appropriate choices, with 1 for the source which provided the biggest proportion of the funds, 2 for the second biggest proportion, and 3 for the third biggest proportion.)

( ) A. bank loan
( ) B. issuing shares in the stock markets
( ) C. profit retention
( ) D. internal funds pool raised from employees
( ) E. government subsidies
( ) F. Other (please state)__________

24 Is the production equipment currently used for the production of your main products in your firm comparable to those used in identical industries outside China?

( ) A. It is compatible to that at the world level
( ) B. It is less than five-year older than that at the world level
( ) C. It is 5 to 10 years older than that at the world level
( ) D. It is 10 to 20 years older than that at the world level
( ) E. It is 20 to 30 years older than that at the world level
( ) F. It is 30 to 50 years older than that at the world level
( ) G. It is more than 50 years older than that at the world level
( ) H. I don't know

25. What were the proportions of expenditures on R&D to turnover in 1999 and in 1994?

*the situation in 1999
( ) A none
( ) B less than 3%
( ) C 3%--5%
( ) D 5%--10%
( ) E 10%--15%
( ) F more than 15%

*the situation in 1994
( ) A none
( ) B less than 3%
( ) C 3%--5%
( ) D 5%--10%
( ) E 10%--15%
( ) F more than 15%

VIII. INPUTS AND OUTPUTS

26. Which were the most important sources of inputs (raw materials and components) of your firm in 1999 and in 1994?

*The situation in 1999
( ) A. central government

*the situation in 1994
( ) A. central government

( ) B. local government
( ) C. other firms
( ) D. regulated imports
( ) E. open market
( ) F. other (please give details) ____

( ) B. local government
( ) C. other firms
( ) D. regulated imports
( ) E. open market
( ) F. other (please give details) ____

27. What was the proportion of inputs bought at administratively regulated prices to total inputs in 1999 and in 1994?

*The situation in 1999
( ) A. 0%
( ) B. <=10%
( ) C.11-30%
( ) D.31-50%
( ) E.51-80%
( ) F. >=81%

*the situation in 1994
( ) A. 0%
( ) B. <=10%
( ) C.11-30%
( ) D.31-50%
( ) E.51-80%
( ) F. >=81%

28. What was the proportion of your products sold at administratively regulated prices to the total output in 1999 and in 1994?

*The situation in 1999
( ) A. 0%
( ) B. <=10%
( ) C.11-30%
( ) D.31-50%
( ) E.51-80%
( ) F. >=81%

*the situation in 1994
( ) A. 0%
( ) B. <=10%
( ) C.11-30%
( ) D.31-50%
( ) E.51-80%
( ) F. >=81%

Appendix 6.1: Questions Used in Interviews

Question 1
Could you give some general information on the firm (history, firm size, reform measures implemented and the time when they were carried out, financial status)?

Question 2
Is the firm subordinate to any government agencies? If yes, in what sense?

Question 3
Who are the most influential agents when formulating the main objectives of the firm and how are these goals reflected in the business plans of the firm and the management contract (if the Contract Management Responsibility System is still in use)?

Question 4
Could you describe the general organisational structure of the firm? Have there been any changes in the structure (both in functional departments and the administrative hierarchy) in the five-year period from 1994 to 1999?

Question 5
What is the structure of the Party organisation in the firm and were there any changes in the structure during 1994 to 1999?

Question 6
How are the senior managers of the firm appointed, rewarded, and evaluated?

Question 7
How are the middle managers of the firm appointed, rewarded, and evaluated?

Question 8
How is the size of the firm's workforce determined? What were in 1999 and in 1994 the proportions in the workforce of permanent, contractual and temporary workers, respectively? How were their salaries determined?

Question 9
Did the firm conduct any investment projects during the period from 1995 to 1999? How were the funds needed raised?

Question 10
Please indicate any changes, during 1994 to 1999, in the proportions of the inputs bought and the products sold at market prices. Please indicate any changes in the product mix during the same period and the market position and profitability of the main products.

Question 11
Has the firm ever produced new or improved products? How does the firm develop new or improved products? Please indicate the market status of the new or improved products, if any, when they were put in the market (was the firm one of the first few producers or the follower of other firms)?

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