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**INSTITUTIONAL PERSPECTIVES ON POST-SOCIALIST
TRANSFORMATION WITH PARTICULAR REFERENCE TO TOWNSHIP AND
VILLAGE ENTERPRISES IN CHINA**

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ABSTRACT

The orthodox transition literature, that has dominated the debate on Eastern Europe, argues that well-defined property rights are a precondition for successful transition in post-socialist countries. As a result, most of this literature has treated the success of China's economic reforms as an enigma. The dilemma for "transition economists" is that the driving force behind China's high rate of economic growth has been the outstanding performance of its township and village enterprises (T.V.Es). Yet, in most cases, it is not clear who owns the T.V.E - the local residents or the township and village government. This thesis puts forward two main arguments. The first is that the success which T.V.Es have had can be explained through drawing on different notions of the division of labour. The second is that T.V.Es are a specific example of a broader literature on regionalism and that their success suggests some wider lessons. These form the basis of an alternative vision for post-socialist transformation based on collective learning. The thesis suggests that there is a legitimate cognitive function for less than arms-length relationships in post-socialist economies as part of a more general pattern of institutionalised diversification.

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CHAPTER 1

INTRODUCTION

"I think the only proper way to ownership reform is to allow people to experiment with different forms of ownership in different industries. From [a] dynamic point of view ... I prefer not to say simply that capitalist ownership is private ownership. What I want to emphasise is that a good ownership structure ... should be capable of adjusting itself to the constantly changing environment".

Cui (1991 p.64)

"[O]rganisational reform in transitional economies has not been fixed in any definite direction yet. A variety of organisational forms may evolve through [the] spontaneous reaction of insiders to competition, the heritage from communism or the rural community, the selective emulation of advanced organisational forms [or] the deliberate introduction of clearer functional specialisation. ... [T]here is no organisational form which is absolutely superior, ... one of the advantages of transitional economies is that they may be able to generate a diversity of organisational forms by the selective emulation of better organisational forms depending on [the] technological and stochastic environment of each industry."

Aoki (1995 pp.350-351)

1.1 OVERVIEW

There is a substantial literature on post-socialist transformation. There is also a smaller, although still prominent, sub-literature on the possible lessons from the Chinese experience for other socialist or post-socialist economies. Most of this sub-literature concludes that China's relative success is due to specific conditions that are not replicated in other transitional economies. Hewett (1988 p.302) is representative when he writes "China's experience is in many ways particular and probably of limited use to [Eastern Europe]".¹ The focus in the

comparative literature has been on the differences between China and Eastern Europe such as the size of the agricultural sector and the degree of centralisation. An important factor in China's success that has often been neglected, at least in the broader context, is the role of township and village enterprises (from this point on T.V.Es). To the extent that T.V.Es have been considered, in the comparative sense, two divergent approaches seem common. The first lumps T.V.Es with private firms and argues that "non-state firms" show the importance of competition and creating incentives. The second recognises T.V.Es' ambiguous institutions but recommends clarification for future development. The latter approach treats T.V.Es as anomalies or short-lived phenomena with little relevance to other socialist and post-socialist economies.

This reflects a general trend in the wider post-socialist transition literature to overlook that one of the most interesting features of transforming economies is that a range of organisational forms is possible. Most writers focus on "completing" the reform which means that they make no attempt to explain why, in some cases such as in the T.V.E sector, the "partially reformed" reality has been successful. The emphasis on completing the reform means that, instead, most commentators tend to compare the partially reformed reality with the notional idea of private ownership. This focuses attention on the theoretical problem of how to design a workable mechanism which is faithful to the basic tenets of individualistic property rights. The result has been that, in spite of the contributions of people like Aoki and Cui, the idea that different organisational forms might be preferable in different circumstances and at different points in time has had little impact in the wider debate. This thesis hopes to take some small steps towards changing this situation through two avenues. The first is through making a contribution to the limited theoretical literature explaining T.V.Es. The second is to suggest that the basis of T.V.E development might be relevant to the transformation path in other socialist or post-socialist economies.

1.2 T.V.Es AND THE WIDER DEBATE

Township and Village Enterprises

There is some confusion in the literature about the definition of T.V.Es. The term T.V.E will be used in this thesis to refer to enterprises affiliated with a township or village government (T.V.G) - ie. xiang (township) and cun (village). The broader term - rural enterprise - will be used to refer to rural, non-state, non-agricultural enterprises. The term "rural enterprise" covers both T.V.Es (as defined above) and various below village categories such as co-operatives, partnerships, private and individual firms. T.V.Es, and in a broader sense rural enterprises, have been the driving force behind economic growth in China. The number of rural enterprises grew at an average annual rate of 17.1% between 1985 and 1995. During this period the number of workers grew at 8.4% p.a and real gross output value at 26% p.a. Considered in isolation T.V.Es have not expanded at the same rate as rural enterprises as a group but, measured in terms of growth in real gross output value, their performance has still been outstanding. Between 1978 and 1995 the number of T.V.Es grew at 1.9% p.a, while the number of people employed in T.V.Es increased at around 5% p.a. Over the same period the real gross output value of township enterprises increased at 19% p.a, while the real gross output value of village enterprises increased at 20.9% p.a (based on State Statistical Yearbook various volumes).²

The interesting point from an international perspective is that T.V.Es have performed well in spite of, or perhaps because of, their unusual institutional arrangements. The proprietor interests in T.V.Es seem ill-defined when judged in relation to theories of mainstream property rights. Most people consider that the residents of the township or village, which established the T.V.E, own the firm, but the township-village residents do not have the privileges of ownership - ie. the right to transfer, use or appropriate the assets. The property rights in the T.V.E are executed through communal representatives - the T.V.G. The T.V.G

has a pivotal role in setting up the T.V.E and, at least in the initial stages, exercises tight control over most T.V.Es. T.V.Es, for this reason, are sometimes considered to be T.V.G run enterprises although, at times, T.V.Gs act more as if the T.V.E belonged to them rather than the township-village residents. The situation is also complicated in some T.V.Es which claim to be collectively-owned but, in fact are operated by individual entrepreneurs. The property rights in these T.V.Es are not clear because, in most cases, the entrepreneurs received initial authorisation from the T.V.G to use the land and/or assistance from the T.V.G to raise capital. The issue of who owns the assets of the T.V.E is muddled in situations like this. The entrepreneur benefits from his/her relationship with the T.V.G, but the value of the T.V.E's assets often outweighs the value borrowed from, or with the help of, the T.V.G (see Xu 1995 pp.16-21).

There are at least two institutional factors that seem central to the success of T.V.Es. The first is the existence of informal institutions. These include implicit contracts in inter-firm transactions, in financial transactions, in labour market arrangements and in intra-firm relationships. These informal institutions are popular among T.V.Es as surrogates for formal rules, formal contracts and well defined property rights. The second is the concept of social embeddedness. This refers to the social component of contracting. The concept of social embeddedness covers factors such as the role of kinship ties and trust, built up in personal relationships in the external contracts of the T.V.E. The importance of these sort of factors varies between township and village enterprises. The usual village consists of hundreds and no more than a couple of thousand people. Most village residents will have lived there for a long time and know each other well. There is often strong kinship links between villagers, and kinship ties in village politics are common. The usual township consists of several thousand or more people. There is not the same degree of closeness between residents. The result is that the importance of social ties and informal

institutions in the T.V.Es' contracts is reduced (Goodhart & Xu 1995 pp.33-35).

T.V.Es in the Wider Debate

Most of the influential literature in the wider debate, in particular on Eastern Europe, has advocated immediate transition to private property rights and/or clarification of ambiguous property rights. This is a generalisation and there is some room for argument around the edges. At one level it is true that none of the countries in Eastern Europe implemented the "pure" strategies proposed in academic articles and, at another level, there is some debate about the extent to which some countries were radical or gradualist. However, in terms of actual influence on the formulation of policies in Eastern Europe, the "rapid transition" or "big bang" approach to reform dominates the debate.³ The main advocates of big bang have held influential positions as advisers to governments in Eastern Europe - eg as part of Yegor Gaidar's team of economic advisers in Russia. The big bang approach to reform, of course, consists of more than ironing out property rights. Fischer (1994 p.237) describes big bang as "a prescription to proceed as fast as possible on macroeconomic stabilisation, the liberalisation of domestic trade and prices, current account convertibility [and] privatisation, ... while simultaneously creating the legal framework for a market economy". Nonetheless, the ownership structure is the central issue. The reform package is contingent on "rapid and massive privatisation" because "the government is in a race against time". Therefore, unless privatisation occurs "quickly and on a vast scale", economic gains from transition will be lost (Sachs 1991 pp.40-41).

However, the Eastern European economies, without exception, have not performed as well as China. This raises a dilemma for advocates of the big bang approach. Most people accept that T.V.Es are driving China's performance, but their institutional arrangements are ambiguous. There are some statistics on the real annual rate of growth in G.D.P for China and some

TABLE 1.1
SELECTED ECONOMIES IN TRANSITION: REAL ANNUAL RATE OF GROWTH IN G.D.P (%)

COUNTRY	1980-1985	1985-1990	1991-1994	1995	1996 ^f	1997 ^f
China	10.2	7.8	11.4	10.2	9.7	11.1
Russia	3.2	1.3	-10.2	-4.0	1.9	4.1
Bulgaria	4.3	2.6	-5.0	2.5 ^e	2.5	n.a
Czech Rep.	n.a	1.8	-4.7	4.8	4.7	6.0
Slovak Rep.	n.a	1.5	-5.2	6.5 ^e	5.5	n.a
Hungary	1.8	0.6	-3.2	1.9	3.1	3.6
Poland	0.7	0.3	1.2	6.8	5.7	5.2
Romania	3.8	-2.1	-4.1	6.9 ^e	4.5	n.a

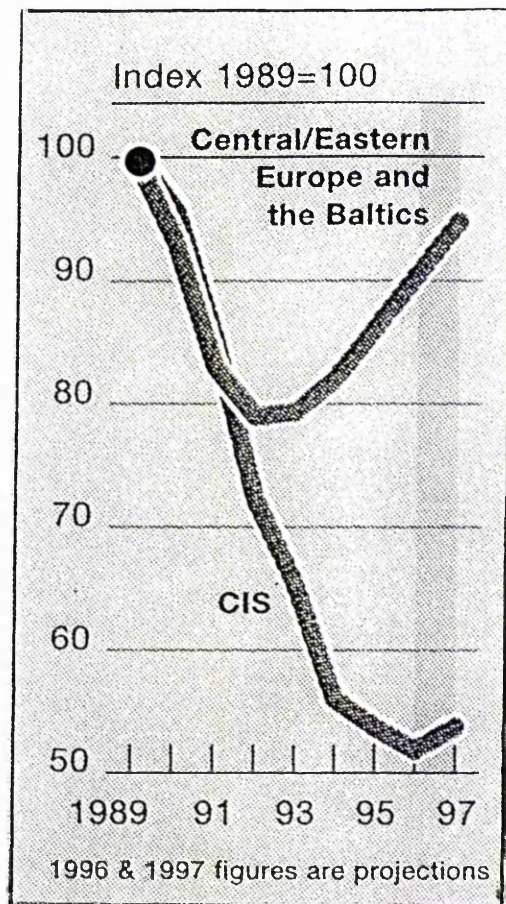
NOTES: e=estimate, f=forecast, n.a=not available.

SOURCES: World Bank Tables (1995) and Institute of International Finance Report April 1996

representative Eastern European countries in table 1.1. The obvious point from the table is that China's rate of growth has been much higher than the Eastern European countries. The average annual rate of growth in China's G.D.P for 1985-1995 inclusive was 9.9%. This contrasts with the figures for the Eastern European countries which, with the exception of Poland, experienced a negative average annual growth rate for the period 1991-1994. Each of the Eastern European economies performed better in 1995 than their 1991-1994 average, but two points should be noted. First, the growth rate for each of the Eastern European countries in 1995 as well as the growth forecasts for 1996 and 1997 are not as good as for China. Second, output levels in Eastern Europe have not yet returned to their pre-transition levels. Figures on G.D.P levels in Central and Eastern Europe for 1989 to 1997 are given in figure 1.1. The projected G.D.P levels for Central and Eastern Europe in 1997 are about 95% of their pre-transition levels. And the equivalent figures for the Commonwealth of Independent States are much lower at below 55% of their pre-transition levels.

How do advocates of big bang in Eastern Europe explain this? There seem to be two main approaches. The first approach is to argue that China's relative success will be short-lived unless property rights are clarified. This view was

FIGURE 1.1
GDP LEVELS IN CENTRAL AND EASTERN EUROPE 1989-1997



NOTES: Central/Eastern Europe and the Baltics comprise:
Albania, Bulgaria, Croatia, Czech Rep., Estonia, Hungary, Latvia, Lithuania,
Macedonia, Poland, Romania, Slovakia and Slovenia.

The Commonwealth of Independent States (CIS) comprise:
Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova,
Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

SOURCE: Financial Times Survey, 'Investing in Central and Eastern Europe' p.1.,
April 11, 1997

common in World Bank publications in the immediate post-reform period in Eastern Europe when enthusiasm for the reforms was still high. The World Bank, for example, in its 1990 report on the Chinese economy stated: "The uncertainty attending the ownership system is putting serious obstacles in the way of improved performance" (World Bank 1990 p.149). The World Bank recognises the success T.V.Es have had in more recent reports, but still urges privatisation for continuing success. The 1996 *World Development Report* concludes "T.V.Es will continue to grow, but they must also evolve. As the demands for finance increase and extend beyond their communities, and as people become more mobile, the T.V.Es' limited and implicit property rights will need to be better defined and made more transferable" (World Bank 1996 p.51).

The second, more sophisticated, approach is to argue that there are structural differences between China and Eastern Europe which explain the different performances (see eg Sachs & Woo 1994, Woo 1994, Sachs 1995 1996). There are specific factors which explain China's success which are not replicated in other socialist and post-socialist economies. The argument is that these factors and not the choice of strategy explain differences in performance. Woo (1994), for example, points to a range of initial conditions that existed in China, but not in Eastern Europe. (i) The agricultural sector was larger in China than Eastern Europe. (ii) The non-state sector was larger in China than Eastern Europe. (iii) China's planning structure was more decentralised than Eastern Europe. (iv) The Great Leap Forward and Cultural Revolution weakened the administrative capacity of the state and discredited central planning in China. Most papers adopting this approach conclude that, given these advantages, it was inevitable that China would perform better, but the lessons for transforming economies are limited. However, some (eg Woo 1994) go further and argue that, given the favourable structural conditions in China, its performance would have even better if it had adopted a big bang approach.⁴

A range of alternative views are put forward in a small number of papers which

make a serious attempt to explain T.V.Es' ambiguous institutional structure. For example Weitzman & Xu (1994) suggest that T.V.Es can be studied in terms of the folk theorem of repeated games. Their argument is that societies differ in their degree of co-operative culture. Where co-operative culture is weak standard property rights stories are applicable, but where co-operative culture is strong implicit contracts might be preferable to arms-length transactions. Pei (1996), on the other hand, argues that the township-village is a coalition of "inter-specific" resources which are owned in common. Pei argues that these resources generate net benefits which the township-village, as a whole, appropriates as economic rents. T.V.Es have been successful because net benefits of collective action have increased with fiscal decentralisation. Chang & Wang (1994), take a different tack, arguing that the T.V.E is designed to maximise the welfare of local citizens. The T.V.G, according to Chang & Wang, is given the control rights because its guiding influence is critical to the success of the T.V.E. The nominal ownership is vested in the township-village residents as a commitment that most of the benefits will remain local. Naughton (1994) focuses on the T.V.Es' external relations. He suggests (1994 p.266) "T.V.Es are responses to the early creation of product markets which exist for a prolonged period without well developed markets for either factors of production or assets".

1.3 OBJECTIVES OF THE THESIS

The objectives of the thesis are twofold. The first is to provide a theoretical and empirical contribution to the literature on T.V.Es. The descriptive literature on T.V.Es is of a reasonable size (eg Byrd & Lin 1990b, Findlay *et al* 1994, Ho 1994). However, studies on T.V.Es are just beginning to enter a more theoretical stage. Thus, this is an area which is in need of further research. This thesis hopes to take some steps towards changing this through making two contributions to the limited theoretical literature mentioned above (Chang & Wang 1994, Weitzman & Xu 1994, Pei 1996 and Naughton 1994). The first is a

regional model of T.V.Es which draws on the literature on reputation effects. This model, like Chang & Wang (1994) *et al*, is at the level of verbal theorising. The second is a formal model looking at the trade-offs occurring, in particular in the larger coastal firms, as T.V.Es' contracts extend outside local communities. The empirical literature on T.V.Es is also limited, perhaps because of limited data. This thesis also seeks to make a contribution to this literature through testing propositions which are related to the arguments in the theoretical models.

The second more speculative objective is to suggest that T.V.Es contain general lessons for the path of post-socialist transformation. This involves taking a different approach to the advocates of big bang outlined above. It also involves taking a different approach to some of the existing theoretical literature on T.V.Es (eg Weitzman & Xu 1994 who explain T.V.E success on the basis of differences in co-operative culture between East Asia and Europe). The theoretical treatment of T.V.Es in this thesis will be developed within a framework which points to the similarities rather than the differences between China and other socialist and post-socialist countries. There is no doubt that China has some structural advantages, such as those which Woo (1994) mentions, which are not replicated elsewhere. However, the fact is that China has not just outperformed countries in Eastern Europe but has also performed much better than other developing countries with similar structural advantages. Thus, there seem to be some more "basic" factors explaining T.V.E success which might be relevant to the strategies adopted in other socialist and post-socialist countries. These are factors inherent in the transformation process such as path dependencies. All post-socialist economies share some common path dependencies such as a political heritage from communism. This thesis hopes to draw out some similarities as part of a broader objective to present an alternative view of post-socialist transformation to the big bang approach.

However, a point that should be made from the start is that this thesis does not seek to make a definitive judgement about the role of T.V.Es in China's overall economic development. The scope of this thesis is limited to providing an explanation for T.V.E institutions at a micro level. The thesis does not attempt to give an historical explanation for T.V.Es or provide a macro framework for considering the evolution or behaviour of T.V.Es in a broader context. The thesis does touch on some of these broader issues, but this is not its main focus. Thus comments on broader issues relating to T.V.Es are at best suggestive.

1.4 OUTLINE OF THE THESIS

The next two chapters are general in nature. The next chapter reviews the existing literature on post-socialist transformation and chapter three sets up the skeleton of an alternative approach. Following this, chapters four to seven focus on T.V.Es. Two theoretical models are presented in chapters five and six and some empirical results are presented in chapter seven. The possible lessons for other socialist and post-socialist economies are considered in chapter eight.

The rest of this section elaborates on the contents of specific chapters:

The next chapter has two objectives. The first is to review the literature on post-socialist transformation from an institutional perspective. The institutional environment has received some attention in the literature (eg Clague & Rausser 1992), but is often overlooked. The second is to provide a background to the economic reforms in China and evaluate them from a property rights perspective. A central theme in the chapter will focus on whether the creation of private property is essential to the success of post-socialist transformation or whether it should be seen as open-ended where some *ex ante* unspecified organisational form(s) might emerge. The chapter suggests that conventional arguments based on private property rights, in the wider literature, do not

provide a *theory* which can explain socialist transformation in China. This is a shortcoming which later chapters, in particular chapters five and six, seek to address through developing two related theories based on informal institutions.

The third chapter considers three different rationales for the firm - the market, hierarchies and collective learning paradigms. The chapter has two objectives. The first is to introduce and develop the concept of collective learning as an alternative to market-hierarchies stories. There are some disparate strands of literature - literatures on the Japanese firm, flexible specialisation and techno-economics - which share common characteristics. These common characteristics form a collective learning theme which, it will be argued in later chapters, forms the basis of an alternative approach to post-socialist transformation. The second objective is to explore the tension between the collective learning and market-hierarchies paradigms. The chapter will argue that the tension reflects the heterogeneous nature of the division of labour, and some attempt will be made to reconcile the tension through considering recent developments in the endogenous growth literature. These ideas provide the basis of the formal model in chapter six which explores the trade-offs between different paradigms.

The emphasis in chapter four shifts from the wider literature to focus on T.V.Es. The chapter contains two main parts. First, the chapter discusses the institutional characteristics of T.V.Es in some detail and raises the spectre that less than arms-length relationships between T.V.Es and T.V.Gs contain some positive features. There is also some discussion about T.V.E performance and non-institutional problems facing T.V.Es. However, as pointed out above, the main theoretical treatment of T.V.Es in this thesis is institutional based and micro oriented. The thesis does not purport to provide a broad macro framework so that comments on some of the broader issues are suggestive and not conclusive. Second, the chapter considers the manner in which T.V.E

institutions have been reviewed in the literature. This part evaluates the few existing theories of T.V.Es (such as Chang & Wang 1994 and Weitzman & Xu 1994) and suggests some avenues forward based on cooperative culture.

A model which presents an alternative to existing theories is presented in chapter five. The chapter attempts to explain why T.V.Es have been successful in the presence of ill-defined institutional arrangements through a regional model of T.V.Es' contracts. The T.V.E, in the regional model, is depicted as a strategic core which is supported through a series of informal institutions or strategic alliances. The strategic core is limited to core assets - reputation capital. The T.V.E's incentive to cultivate a reputation for meeting its informal obligations is that if it does not it will impose extra costs, manifest in a risk premium, on forming informal contracts. A good reputation forms the basis for strategic alliances at low costs because the risk of default to the other party is reduced. Hence the T.V.E's reputation is a long-term investment in an intangible asset. T.V.Es which are prepared to explore avenues for co-operation, based on reputation, might generate economic rents conducive to value creation. The relationship between the T.V.E and political centre (central government) also represents a form of strategic alliance. The political centre confers legitimate authority on the T.V.E sector. The T.V.E-T.V.G relationship forms a mechanism for solving collective action problems that build up around informal institutions.

The regional model in chapter five is extended in chapter six to explain the behaviour of a growing number of larger T.V.Es who enter into inter-regional and international contracts. The behaviour of these T.V.Es does not fit well with regional based explanations which just focus on reputation. It is argued that the growth in the number of larger T.V.Es has resulted in important related trade-offs between informal and formal exchange and between collective learning and specialisation. With the growth in the T.V.E sector regional based explanations,

like that which will be presented in chapter five, need to be extended in order to explain these developments. The model, in chapter six, applies the notion, from chapter three, that the collective learning and market-hierarchies literatures can be depicted in terms of different concepts of the division of labour. The chapter has two inter-related aims. First, point to, and formalise, some of the relevant trade-offs that have emerged with the growth of T.V.Es. Second, suggest that T.V.Es are developing a dual character. This entails a core of strategic alliances based on informal exchange similar to the *kigyo shudan* (or business grouping) in Japan and an extended sector in which formal exchange is predominant.

The empirical part of the thesis is in chapter seven. It sets out and discusses two sets of regressions which test propositions related to the theoretical models in chapters five and six. The first set of regressions tests the relationship between profit rate and workers' share in T.V.Es. This regression uses pooled cross-sectional and time series data for the period 1987-1991 inclusive and 1993. The second set of regressions tests whether the role of the T.V.G as a mechanism for solving collective action problems diminishes with increased worker socialisation. It uses cross-sectional data on industrial T.V.Es for 1987 and pooled data on T.V.Es as a whole for the period 1989-1991 inclusive. The general implications of the theoretical models and empirical testing are examined in chapter eight. This chapter considers the possible broader significance of T.V.Es for other socialist and post-socialist economies. The regional model, in chapter five, is developed within a framework which argues that T.V.Es are part of a broader "new regionalism" with a basis in the collective learning literature. The main objective of chapter eight is to explore this theme a little further. This involves consideration of the extent to which the institutional structure of T.V.Es presents a viable alternative vision to the big bang approach for other socialist and post-socialist economies. The last chapter (chapter nine) concludes the thesis with some general observations on the thesis as a whole.

CHAPTER 2

INSTITUTIONAL PERSPECTIVES ON POST-SOCIALIST TRANSFORMATION

2.1 OVERVIEW

This chapter reviews the institutional literature on post-socialist transformation. The chapter presents some of the most influential institutionalist perspectives and evaluates their relevance to transforming economies. There will be two main themes. The first theme will focus on whether the creation of private property is essential to the success of the transformation phase, or whether the transformation phase should be seen as open-ended where some, as yet unspecified, distinct organisational form(s) might emerge. This is a contentious issue. While there is a growing literature which suggests that under certain circumstances partial property rights are more conducive to development, most of the institutional literature sees the creation of secure private property as the ultimate goal of transformation. However, it will be argued that, at the same time, this literature either does not adequately address the issue of how to create secure private property rights in practice, or simply assumes, rather than justifies, the need for secure private property.

The second more general theme will be that while the institutional literature touches on some of the issues relevant to post-socialist transformation, it is inadequate because it is too general and does not always accord with empirics. This is, in part, due to the fact that the literature (a) is, itself, quite new and often conceptually inadequate and ill-defined and (b) seeks unquestionably to extrapolate from theory developed, however appropriately, for very different circumstances. There is a presumption of generality and completeness. But, the process of post-socialist transformation is more complex than most of the existing literature suggests. This is a shortcoming which this thesis will attempt to

address in later chapters building on the partial property rights literature.

The chapter also provides a brief overview of the economic reforms in China and evaluates them from a property rights viewpoint. However, no attempt is made to present a comprehensive review of the literature on China's economic reforms. The aim, rather, will be to highlight that China's reforms are not consistent with a general model that emphasises completeness in property rights. The chapter is set out as follows. Section 2.2 will review the application of specific institutional theories to post-socialist transformation. The theories to be considered are property rights economics, principal-agent theory, new economic history and evolutionary theory. The background to the economic reforms in China are presented, and evaluated from a property rights perspective, in section 2.3. Finally, there are some concluding comments in section 2.4.

2.2 COMPARATIVE INSTITUTIONAL ANALYSIS

2.2.1 New Institutional Economics

New institutional economics (N.I.E) spawned from dissatisfaction with neoclassical economics. There are various strands of new institutional economics which include property rights, new economic history and evolutionary economics. The common thread linking researchers in each of these areas is a belief that institutions matter and that institutions are susceptible to analysis.¹ The application of new institutional economics to the problems faced by economies in transition, however, is still in its relative infancy. There are an increasing number of articles offering broad, often country specific, views on the role of institutions in the transformation period (see eg Nee & Stark 1989a, Krueger 1992, Liebold 1992, and Nagy 1992), but, on the whole, these do not provide a common theoretical perspective. The main contributors to N.I.E such as

Williamson, North and their respective followers are only now starting to turn their attention towards the problems of post-socialist transformation, bringing with them the first parts of new unifying underlying theories.

2.2.2 The Property Rights Perspective

There is a growing literature which applies property rights to either post-socialist transformation or particular issues confronting socialist and post-socialist economies. The literature includes the application of property rights to (i) socialism and post-socialist transformation in general (see *e.g.* Pryor 1973, Blommestein & Marrese 1992, Comisso 1989, 1991 and Jasinski 1992); (ii) problems facing economies in transformation in Eastern Europe and the former Soviet Union (see *e.g.* Schroeder 1988, Szakadat 1993, Lawandowski & Szomburg 1989, Pejovich 1987, 1989, 1990a, 1990b, Poznanski 1993, Hanson 1990 and McFaul 1996); and (iii) problems facing the Chinese economy (see *e.g.* Granick 1990, Liew 1991, Lee 1991 1993, Nee 1992, Shi 1993 and Jefferson & Rawski 1995).

A positive feature of the property rights literature is that, historically, it was influential in broadening the scope of the debate on socialism. The early contributions of Alchian (1961) and Demsetz (1967) suggesting that an evolutionary, as opposed to technological, approach to economic organisations was required, breathed new life into the argument about socialism which had largely withered following the 1930s debates (Williamson 1993b). The socialist controversy of the 1930s brought together the critics - von Mises and Hayek - and proponents - Lange and Lerner - of socialism (see Bergson 1948). The debate focused on setting prices equal to marginal cost, while "nagging problems such as incentives, controls and bureaucracy.... were never systematically addressed" (Williamson 1991b). The importance which the property

rights approach attached to transaction costs rekindled interest in these wider issues where Oskar Lange (1938) had considered them outside the competence of the economist. This opened up important new lines of research investigating *inter alia* socialist labour market reform (see eg Granick 1988) and the socialist firm (see eg Ben-Ner & Neuberger 1989).

Nevertheless, there are some difficulties with this perspective as a general paradigm. The main lesson which flows through the property rights literature is that governments need to get the property rights structure straight and all else will follow. Cooter's (1987) position is representative. He states "provided that the legislature clearly defines property and contractual rights and that the legal system enforces those rights, then private agents will negotiate efficient outcomes" (1987 p. 458). When Cooter refers to efficiency it is fair to assume that he means Pareto-efficiency or allocative efficiency. A potential problem with this argument is that even if property rights are fully assigned, it is not clear that allocative efficiency will address the main problems of socialist economies. Murrell (1992b p.37), for example, argues that "growth and change and thus innovation" are more important than allocative efficiency.

A related problem with the property rights approach is that allocative efficiency, in the property rights sense, tends to be seen in terms of the static end-state rather than the process (if any) approaching it. Building a market culture might be more important in the transformation phase than simply focusing on property rights narrowly defined. The concept of market culture is more broad than just property rights. The idea of building market culture is a multi-disciplinary undertaking involving reassessment of the structure and outlook of socialist society. This is important because it implies that there is more to post-socialist transformation than setting up a paradigm where, in an ideal world, private agents are free to negotiate

allocative efficient outcomes free from outside interference. There are arguments on both sides of the big bang versus gradualism debate, but what seems undeniable is that the falls in output in Eastern Europe suggest that it is not possible to introduce market institutions in rapid succession without significant short-term costs. The introduction of private property rights, in reality, is more complex than Cooter (1987) implies.

There might need to be a significant period of stable convention and market tradition before a strong property rights framework can evolve. Yang (1994) suggests that the dilemma facing the post-socialist and socialist countries in transformation is that "communist revolution interrupted the evolution [of market tradition] and it may not be possible to now simply discontinue the socialist tradition and socialist culture which replaced it and reinstate private property rights" (1994 p.28). To the extent that there is an implication in this passage that there was a natural evolution toward the property rights "ideal" many would disagree. Madsen Pirie argues that there was a natural evolution towards competitive capitalism in England,² but even if this is true there is nothing to suggest that China or Eastern Europe fits the Anglo-Saxon model. But, more than this, the role which the state played in the evolution of capitalism in England and the rest of Western Europe is also debatable.

Polanyi (1957), in contrast to Pirie, argues that the state had a pivotal role. He states (1957 pp.139-140): "There was nothing natural about *Laissez- Faire*; free markets could never come into being merely by allowing things to take their course. The road to a free economy was opened and kept opened by an enormous increase in continuous, centrally organised and controlled centralism". This issue needs to be borne in mind when looking at the broader picture, but, having said this the more general point Yang makes that it will take time to build market

tradition is pertinent. While rules may be changed overnight, the informal norms that provide legitimacy to a set of rules usually change only gradually (North 1994 p. 366). The transformation period, therefore, is likely to be a gradual process where new market conventions and a new market tradition have to re-emerge. This suggests that there is a need for a richer model to explain the interim period when the market culture is still emerging than the standard property rights literature has so far provided.

2.2.3 PRINCIPAL-AGENT THEORY

The principal-agent problem exists where (i) there is a conflict of interest between a principal (eg an owner) and an agent (eg a manager) and (ii) there are observability and information asymmetry problems. The conflict of interest arises where the principal and agent have different objectives. The objective of the owner might, for example, be profit maximisation while the manager might have broader objectives such as on-the-job perks, an easy life or empire building (Hart 1990). The observability problem arises because, although the principal can see the final outcome in terms of output or profit of an agent's action, he/she is unable to monitor what the agent actually does. Information is asymmetric because the agent is the only person that knows his/her true effort. This sets up a moral hazard problem where the agent might take advantage of the principal's ignorance to pursue his/her own goals at the expense of the principal's welfare. The principal-agent literature is concerned with designing the "optimal" contractual arrangement between principal and agent that will induce the agent to act in the best interests of the principal.

The principal-agent model has been used to evaluate the C.M.I. reform package in China (see Lee 1991 chap. 5, 1993 and Cauley & Sandler 1992). The term "C.M.I.", which was coined by Lee (1991), is an acronym

for the contract management system (C.M.S.), the managerial responsibility system (M.R.S) and the internal contract system (I.C.S.). The C.M.S was a reform where managers of state-owned enterprises signed contracts with the relevant state organ (*ie.* local agencies) making the manager responsible for the enterprise's profits, losses and long-term accumulation. In theory, the M.R.S was designed to make the manager responsible for setting wages, bonus policies and other economic matters. While bureaucratic constraints meant that this objective was often not met in practice, the M.R.S did provide managers with greater freedom to set the economic agenda of the enterprise. The I.C.S was introduced to build a more effective internal incentive system. This entailed a "web of multi-tier sub-contracting within the enterprise" (Lee 1993 p.184). There were four levels in the hierarchy of contracts. These were between (i) the state and enterprise managers (ii) the manager and division directors of an enterprise (iii) the division director and team leaders and (iv) the team leader and individual workers (Lee 1993 p.183).

The essence of Lee's argument is that in a hierarchical principal-agent model, collusion among agents emerges. The Chinese hierarchy of economic management consists of at least five strata. These are "the central (Party-State) leadership, local state agencies, the local (or enterprise) party committee, the manager and the worker" (1993 p.180). The central leadership "is the principal who bears voluntarily the political risk of leading the whole society; in a sense, the true residual claimant in socialism" (1993 p.180).³ The other levels of the hierarchy are agents who need to be monitored or given incentives to behave in a manner consistent with the interests of the principal. The principal's problem is how to enforce its enterprise reform measures through its intermediate agents (local organisations) to the manager and worker at the bottom.

Lee draws on a model developed by Tirole (1986). He suggests that the C.M.I reforms were associated with a two-tier collusion problem. The "upper-tier collusion" was between local state agencies and enterprise managers. Here Lee argues that the combined effect of the M.R.S and C.R.S was to replace central leadership interference in state enterprises with an equally interventionist role for local state agencies. Cauley & Sandler (1992), who elaborate on some of Lee's (1991) points, argue that to the extent manager's bonus' depended upon meeting quotas contracted for with the state under the C.M.S he/she was motivated to accommodate the local state agency. Hence the argument is that, while the C.M.S dealt with the relations between local state agencies and enterprises, it did not address the issue of how to monitor local state agencies. The result according to Lee (1991) and Cauley & Sandler (1992) was that enterprise profits and assets were subject to expropriation via collusion between local state agencies and state enterprise managers.

The "lower-tier collusion" was between enterprise managers and workers. Under the I.C.S, workers' compensation was supposed to be made dependent on their performance within the complex web of internal contracts with the enterprise manager co-ordinating the contracts. However, Lee argues that the internal enforcement mechanism was not in place to make either managers or workers accountable for their actions. The manager did not have the power to hire or fire workers (Lee 1991 p.6). Meanwhile the local state agencies were not prepared to tackle manager-worker collusion. On the contrary, local agencies were active participants in the process. Local agencies were prepared to release bonus monies to the worker-supervisor coalition because, in return, they received a portion of the enterprise profits which was not released to the central authorities or retained by the enterprise. Lee suggests this

facilitated an environment in which manager-worker coalitions flourished.

There are some problems with Lee's dual collusion argument which need to be highlighted. The first problem is that, like most property rights theorists, Lee (1991, 1993) and Cauley & Sandler (1992) come from a position that assumes the superiority of private property rights. Cauley & Sandler (1992 p.39) make the somewhat impressionistic statement: "The establishment of property rights is a *necessary* condition for the functioning of markets.... For reforms to work in a centralised economy, property rights must be defined both within and outside the firm" (emphasis mine). This perspective is open to the criticism that it propagates the narrow view that "partial" to "complete" must constitute "good" to "better". A related criticism is that there is little empirical verification in Lee (1991). Lee's approach rests on the assertion that private property rights are a necessary condition for the proper functioning of the market, but this presumption is not supported in the book at an empirical level (see Chan 1996). Moreover, although Lee does make some attempt to support his conclusions regarding dual collusion in the "initial reforms" with statistical work (see 1991 pp. 42-49) there is no empirical analysis to support his views on the C.M.I reforms.

A more general criticism is that Lee's work tends to be one dimensional. The principal-agent paradigm can shed light on some issues in enterprise reform. Most of the points Lee raises about collusion between, on one hand, managers and agencies and, on the other, managers and workers have an element of truth in an empirical sense. However his approach looks at just some aspects and not others. At best this offers a partial perspective. Hart (1990), writing on the theory of the firm, argues that the principal-agent approach fails to answer the question of what a firm is (or what determines its boundaries). "The point is that principal-agent theory

tells us about optimal incentive schemes, but not directly about organisational form" (Hart 1990 p.456). The same criticism can be made of principal-agent theory in the context of post-socialist transformation.

Analytically there are two main problems. First, Lee focuses on exchange or distribution, but disregards the effects of C.M.I on production and value creation. In places Lee seems to treat the C.M.I reforms as if they are based on arms-length contracts between managers of state-owned enterprises and local government, but in practice no arms-length relationship existed. Hence, while Lee stresses the negative aspects of collusive behaviour, from a different angle, transactions at something less than arms-length might have positive connotations. The literature on the Japanese firm, for example, emphasises the importance to the debt-dominated structure of Japanese business of a long-term commitment from the banks. This commitment is instrumental in providing the management of the firm with a stable operating environment, *ie* it insulates them from repetitive takeover raids in the open market, because firms are not dependent on equity financing. The long-term commitment also extends to the on-site management helping to create an environment conducive to incremental innovation (see Freeman 1988). However, most loans are personally negotiated and the relationship between firm and bank is seldom (if ever) at arms-length (see Sheard 1989, Berglof 1989).

Second, Lee's conceptualisation of local authorities as purely individualistic and self-interested ignores their developmental role. Most local agencies show a strong interest in, and take pride in, the development of their region relative to other regions. At times officials in local agencies have also engaged in personal wealth seeking - for example in the 1987-1988 *guandao* (speculating or rent-seeking officials) and 1993 *xiahai* (going down to the sea) campaigns. However, in both

cases the cadres involved tended to be isolated from the central structure.

2.2.4 North's "New Economic History"

The earlier work of North and his collaborators was mainly concerned with the relationship between efficient institutions and economic growth (see eg North & Thomas 1973). More recent studies, however, have focused on the relationship between inefficient institutional change and economic performance (see eg North 1990). Most of this analysis has the recurring theme that "institutions are not usually created to be socially efficient, [but] are created to serve the interests of those with bargaining power to create new rules" (North 1994 pp 360-361). While most of the prescriptive new economic history literature is directed to the rise of modern capitalism in Europe (see eg North & Weingast 1989), much of the literature is also relevant to the debate on post-socialist transformation.

The centre stage which the institutional environment literature gives to the role of the state is particularly relevant. The type of institutions which the state fosters are considered the most important determinants of economic growth (see North 1991 and Dugger 1995). North (1981) is representative of the new economic history approach when he argues that throughout history the interests of the ruling stratum - *i.e.* the *apparatchiks* and bureaucrats - were typically served by an inefficient property rights structure designed to maximise political and economic rent. However the empirical evidence on this point is inconclusive. The lesson from empirical studies such as De Long & Shleifer (1993) is consistent with the view that the interest of state rulers very rarely (if ever) coincided with efficient property rights. But, there have been a number of empirical studies which are documented in Haggard & Kaufman (1989) and Alesina & Perotti (1994), which raise doubts about whether the state can be properly depicted as a collection of self-interested bureaucrats. These

studies suggest that the interests of authoritarian governments, about which the new economic history literature is primarily concerned, are best served by a property rights structure which is designed to maintain a high rate of economic growth rather than extract political and economic rents.⁴

Winiiecki (1990a 1990b) draws on the new economic history theory of the state to analyse institutional change in Soviet-type economies. He argues that the resistance of the communist party *apparatchiks* presents a significant barrier to shifting to a more efficient property rights structure. The difficulties are manifest in two forms. The first is through the principle of *nomenklatura* - i.e. the right of the communist party apparatus to "recommend" and "approve" appointments to managerial positions. The second involves a system of side-payments or kickbacks from managers of (primarily industrial) enterprises which, in a shortage economy, are mostly non-pecuniary in nature (Winiiecki 1990a p.198). However this argument ignores Marxist theories of the state in Soviet type economies. For example, Mandel (1979 chap.12) puts forward the opposing view that bureaucrats are quite happy to embrace private ownership because, unlike the Soviet type system, it allows them to openly amass wealth.⁵

A general problem with Winiiecki's argument is that there are too many generalisations and implicit assumptions. To illustrate, consider the Tiananmen incident. Most journalists and some serious scholars (eg Shi 1994) have characterised the Tiananmen incident as a manifestation of the tension between "hardline" elements (particularly Li Peng) and "reformist" elements (particularly Zhao Ziyang) in the Chinese leadership. These observers argue, as Winiiecki's model predicts, that the Tiananmen incident was largely an expression of dissatisfaction by the *apparatchiks* and bureaucrats with the loss of economic rents and political influence. The depiction of the Chinese leadership as consisting of "hardline" and

"reformist" elements is a stylisation and, as such, is a simplification of what actually exists. The political reality in socialist economies is more complex than Winiecki's model suggests. This is true at both the theoretical and empirical levels. At the theoretical level there are likely to be elements in the government and bureaucracy that are resistant to change, but it is dangerous to generalise that the "state", as a whole, is a collection of self-interested individuals. This criticism also applies to North's theory of the state. This sort of generalisation rests on crucial assumptions about the nature of authoritarian leadership (Haggard & Webb 1993). At the empirical level the fact that politicians often simultaneously hold views that could be interpreted as "conservative" and "radical" combined with political pragmatism means that there is no ready and steadfast dichotomy between "hardline" and "reformist" elements.

Winiecki also does not address the issue of which political structure is most consistent with efficient property rights. This is a criticism that can, more generally, be levelled at the new economic history. North (1994 p.366), for example, states "... an essential part of development policy is the creation of polities that will create and enforce efficient property rights", yet has to admit "we know very little about how to create such polities". Winiecki does speak in broad terms of the importance of "democracy", but the empirical evidence looking at the relationship between democracy and economic growth is inconclusive (see Alesina & Perotti 1994). Similarly, the evidence on the effectiveness of democratic government in establishing property rights is far from conclusive. The very limited Russian government of the early 1990s, for example, has still been completely unable to enforce contracts (see Shleifer 1995 p.115).

2.2.5 Big Bang and Gradualist Perspectives

There are two main premises which underpin evolutionary economics.⁶ First, the primary focus of the analysis should be on the mechanisms that produce growth and change, rather than a series of static equilibria. This is foremost a consequence of the emphasis which evolutionary economics places on innovation as a source of economic growth. Innovation, here, is broadly defined to include not only technological innovation, but also organisational and institutional innovation. Second, the analysis should pay careful attention to the burden which uncertainty places on the informational resources of individuals and organisations. The evolutionary approach sees agents as constrained not only by financial and physical constraints, but also by limits on information processing capabilities.

To overcome the constraints posed by imperfect information, evolutionary economics posits that individuals (through interaction) and organisations (via repetition) develop routines to interpret and process the flow of information. The organisation, constrained by the existing stock of information, continually operates within a narrowly defined set of "neighbourhood routines" (Murrell 1992b p. 39) until some event occurs which frees them from this process. Murrell (1992b p. 39) identifies three such "mechanisms" in capitalist economies. These are: (1) The process of entry - the creation of a variety of new organisations, some of which will find an effective organisational structure. (2) Takeovers, mergers and bankruptcy, each of which remove inefficient organisations and (3) The resource allocation function of the market, via which resources are reallocated from inefficient organisations to efficient organisations.

The evolutionary approach emphasises that the existing stock of organisations and informational flows is a product of the old (socialist) environment. The market might be more efficient in the long run, but in the short run routines and expectations are still best suited to the bureaucratic environment of central planning. The shift from central planning to the market also requires radical institutional change which is costly in the transformation phase. This cost is magnified when the change in environment produces a ratchet effect that removes the possibility of ever returning to past behaviour. The costs are particularly evident when long-stable co-operative agreements are no longer viable and have to be replaced with what are, at least in the short run, less attractive alternatives (Nelson & Winter 1982, Murrell 1992b pp.40-42).

The evolutionary paradigm has been used to justify both big bang and gradualist approaches to reform. Murrell's (1992a, 1993) prescription for reform is typical of gradualist reasoning. He argues that enterprises are generally only able to develop new routines, without a significant loss in efficiency, when exposed to small amounts of institutional change. Murrell's view is that "the institutional matrix at the heart of any successful system [must be] produced slowly in an idiosyncratic, contingent process" (Murrell 1993, p.120). The concept of routines in daily decision making has also been used to support radical approaches to reform. The alternative view to the gradualist perspective, put forward in support of big bang, is that a radical departure from past practices is required to provide the state with the credibility necessary to pursue further reforms. The argument is that there needs to be a "minimum big bang" ie. a complete break from past routines or a critical mass of changes is required. The rationale for this is that the reform process will initially be painful. Therefore, if there is not a complete break with the past, then rather than

make the necessary adjustments, enterprises will subvert the reform process in an attempt to return to the routines of the past with which they feel more comfortable. The term "necessary adjustments" in this context means adjustment to a market economy with private property rights (see Lipton & Sachs 1990). If the economy does not achieve a critical mass of private ownership, rapidly, to induce firms to respond to market signals, the danger is the reform process will be compromised (Roland 1994).⁷

The arguments for and against both big bang and piecemeal reforms are not clear-cut. Most proponents of gradualism (eg McMillan & Naughton 1992 and Murrell 1992 1993) point to the success of the Chinese reforms to support their claim that gradualism works. At the same time they refer to the poor performance of East Europe to argue that radical reform does not work. In contrast, the advocates of big bang (eg Lipton & Sachs 1990 and Sachs & Woo 1994) put forward a disparate range of arguments disputing the premise of gradualist success and/or supporting the basis of big bang reform. Some controversial points deserve particular mention.⁸

(i) Most scholars treat the Chinese reforms as piecemeal. Naughton (1995), for example, likens the reform experience to "growing out of the plan". However, some commentators (eg Johnson 1994 and Walder 1995) suggest that the agricultural reforms involved a big bang. While agricultural growth has slowed considerably since 1984, in the initial reform period the agricultural reforms were arguably the most successful.

(ii) The gradualist approach to reform is most evident in the state-owned sector. The performance of the state-owned enterprises (S.O.Es) in China is particularly controversial (see section 2.3 below). The issues are further blurred when enterprises are categorised by size - large, medium and small - rather than ownership type - state and non-state - (see Lo

1997 chap. 4). Most, though, accept that the state-owned sector is, relative to agriculture and collective owned enterprises (C.O.Es) the least satisfactory performing sector (see Putterman 1995). This view is shared by commentators critical of state enterprise reform (eg Woo 1994 pp.284-288, Lee 1994 pp.191-195) and commentators who are supportive of the broad thrust of state enterprise reform (eg Jefferson & Rawski 1994).⁹

(iii) While debatable, some commentators have suggested that Eastern Europe did not undertake shock therapy as its first option for reform. Sachs & Woo (1994), for example, argue that the big bang approach was only adopted after the repeated failure of piecemeal reforms. Sachs & Woo (1994) further argue that when Russia did implement rapid price liberalisation in 1992 and rapid mass privatisation in 1993, it failed to open the trading system or undertake macroeconomic stabilisation. Hence Sachs' (1992a) position is "the problem is not the reform....the problem is the failure to carry through the reform". This is a controversial statement, and there are many who would disagree with Sachs. Nevertheless, the failure to implement complementary policies rather than the effects of shock therapy *per se* arguably explains, or at least contributed to, the poor performance of the big bang reforms in Russia.

(iv) Poland, which was the most pure example of shock therapy was the first East European economy to show signs of recovery in 1992-1993. The critics of big bang point out that Poland's economy is the "best of the worst" (Murrell 1992a and Gowans 1995). While this is true, the other economies (such as Russia) which started from worse positions may follow. Related to this is the fact that although the economic situation in China looks much better now than it did in 1978, this is only after an

eighteen year period - up to 1996 - whereas the big bang in Poland occurred much later. Therefore there is a good case that there needs to be a further period of adjustment in Eastern Europe before the success, or otherwise, of the radical reforms there can be fairly compared to China.

(v) The advocates of shock therapy refer to the reform experience in Vietnam which, they argue, stands in contrast to China. Woo (1994 p.305) argues that when Vietnam initially undertook Chinese style partial reforms from 1985 to 1988 they were not successful. However, when the authorities adopted a more radical strategy (including rapid price liberalisation and the decollectivisation of agriculture) the growth rate improved significantly. This view of the reform process has some support in Dollar's (1994) article on Vietnam, but it has been questioned in other research - see for example Fforde (1994) and Probert & Young (1995).

While each of these points are debatable, neither gradualist nor big bang perspectives are totally satisfactory. The problem with the big bang approach is that it advocates *transition* to the market, rather than *transformation*, which is open-ended, without (i) providing sufficient reasons why transition need be preferable or (ii) demonstrating that it is possible to create a system which is consistent with individual property rights which will work in practice. The two points are related. Where there is a pre-existing set of policies there is an *a priori* requirement to justify further reform. This involves showing that an alternative set of policies would work better than those that are already in place. The emphasis which advocates of shock therapy place on post-socialist transition *per se* leaves them open to the criticism that they are too focused on (even ideologically driven to - see Gowans 1995) a specific version of capitalism based on the Anglo-Saxon model. The result is that the big bang approach overlooks the potential value of a range of other

models; capitalist models - such as the "Japanese model" and the "German model"¹⁰ - and market socialism which might be better suited, in some circumstances, to building institutions in the transformation period.

The evolutionary approach, in contrast to big bang comes close to advocating an open-ended transformation where different forms of capitalism or market socialism are foreseeable. Moreover, the gradualist argument, unlike big bang, stresses the pitfalls in immediate transition to private property and market regulation. It is, therefore, quite consistent with the emergence of a variation on existing models where new and distinct combinations of organisational forms are possible. The gradualist argument, however, suffers from the same flaws as the big bang approach in one important respect. "[Gradualist] writings have not attempted... to unravel the interplay between the three aspects of their focus: institutions, innovations and economic development. They simply leave the end state to be determined by the market, assuming that the most efficient institutions would thereby emerge ... Their break with big bang [therefore is] far less complete than it appears to be" (Lo 1997 p.20).

2.3 ECONOMIC REFORMS IN CHINA

Most of the literature on China's economic reforms has focused on market formation at a macro-level (see eg McMillan & Naughton 1992, Naughton 1995). The standard argument is that price reforms precipitated a massive entry of non-state firms, an increase in competition among non-state firms and between state and non-state firms and improvements in the performance of state-owned firms resulting from state-imposed market like incentives. In this section the discussion will centre on the role which property rights have played in the broader economic reforms.¹¹ This will take place in two parts. The reforms in rural areas will be considered in subsection 2.3.1. This will be followed by an

examination of urban (enterprise) reform in subsection 2.3.2. This section, however, will not look at the issues which T.V.Es raise. T.V.Es are discussed in chapter four where they are considered in detail. As this stage the aim is to show that standard property rights stories cannot provide a *theory* which can explain the success of China's broader reforms. The main point will be that the empirical evidence on China's reforms is inconsistent with the argument that private property rights are a precondition for successful reform. T.V.Es in later chapters will be used as a focal point for a concentrated study of the challenge to standard property rights approaches posed by the broader economic reforms.

2.3.1 Rural Reforms

Overview of The Reform Policies

There were two principal dimensions to China's rural reforms: (i) The introduction of the household contract responsibility system and (ii) The gradual freeing up of markets for agricultural products. The government, in the first of these, leased specific plots of land to small groups of peasants. The peasants, in return, agreed to turn over a percentage of their product to the state. At first decollectivisation occurred more or less spontaneously, but was quickly adopted by the state and applied nationwide. Thus, what began in the late 1970s as a small-scale experiment to lift the incomes of some of the poorest regions soon spread to other parts of the country. The result was that by 1983 the people's commune and production team, which had formerly been the hallmark of the rural economy, had largely ceased to exist (Perkins 1994 p.26).

The second component of the reforms was the liberalisation of markets for agricultural commodities and household products. There were limited markets (called rural trade fairs) prior to the reforms, but they were always closely monitored. The peasants, subsequent to the reforms, were initially only able to sell household products and secondary products

in the free market. This, however, changed in 1985 when state contracts for grains were made voluntary (see Perkins 1988 pp.607-613 and Ash 1992 pp.547-551). A national trading centre in grains has since been established in Zhengzhou and rice markets have been established in Jiujiang and Wuhu (Bell *et al* 1993 p.17). The number of local markets has mushroomed since 1985. There were estimated to be approximately 72,000 local markets in 1992 (Bell *et al* 1993). These accounted for more than 80% of the trade in agricultural commodities (Perkins 1994).

TABLE 2.1
Various Agricultural Indicators

	1978-1984	1984-1988	1988-1992	1992-1995	1996 ^(f)
<i>Growth</i>					
Real G.D.P ^(a)	8.6	10.3	7.5	11.4 ^{(b)(e)}	9.7 ^(b)
Real Agricultural Growth ^(a)	7.3 ^(d)	3.1 ^(d)	4.3 ^(d)	3.7 ^{(b)(e)}	3.5 ^(b)
Agriculture as a % of Real G.D.P	31.9	29.4	26.4	22.5 ^{(c)(a)}	N.A
Agricultural Value Added ^(a)	7.3 ^(d)	3.1 ^(d)	4.3 ^(d)	3.7 ^{(c)(g)}	N.A
Agricultural Output ^(a)	7.7	5.8	4.9	1.6 ^(c)	N.A
<i>Income</i>					
Average Nominal Wage (Overall) ^(a)	7.9	16.2	13.3	19.8 ^{(c)(h)}	N.A
Average Real Wage (Overall) ^(a)	5.0	5.7	2.9	7.2 ^{(c)(h)}	N.A
Real Average Rural Wage ^(a)	6.7	4.5	0.5	6.9	N.A

NOTES:

(1) All statistics are expressed as percentage averages of the end of year. (2) All statistics were calculated from data contained in *China Statistical Yearbook* (various years) unless otherwise indicated. (3) N.A indicates statistics were not available to the author. (4) (a) indicates statistics which are percentage growth on the preceding year. (b) These statistics are contained in Standard & Poors *China Sovereign Report* Feb. 1996. (c) These statistics are calculated from data which is contained in the Institute of International Finance *People's Republic of China Country Report* March. 1996. (d) The source of these statistics is Perkins (1994) Table 1 and Table 3. (e) indicates that the 1995 figure used is an estimate. (f) indicates that the statistics for 1996 are forecasts. (g) indicates that the 1992-1995 average is for 1991-1994. (h) indicates that figures used for 1995 were for Jan.-Sept. (i) The rural wage is for farming, forestry animal husbandry and fishery.

Table 2.1 presents statistics on various agricultural indicators. The reforms in the initial period improved the rate of agricultural growth. From 1978 to 1984 the average growth rate for agricultural value added was five times what it had been from 1957 to 1978 (Perkins 1994 p.26). The reforms were also successful in raising rural incomes. From 1978 to 1984 the growth in the rural wage, in real terms, exceeded overall growth in the real wage. The statistics, however, after 1984 tell a different picture. The agricultural growth rate slowed in the mid to late 1980s, returning to levels consistent with its long run average. The rate of growth in rural income also stagnated following the initial burst, falling below the overall average after 1984. In three years since 1984 real rural wages have contracted - 1988, 1989 and 1993 (China Statistical Yearbook various volumes).

Property Rights Issues

Prior to 1978 there is fairly wide consensus that property rights in the agriculture sector were "impaired" - in particular in the Great Leap Forward (1958-1960) and Cultural Revolution (1966-1976). Wills and Yang (1993a p. 56) identify five separate ways in which property rights were affected prior to the economic reforms. These are as follows. First, the mandatory procurement system forced production teams to deliver a certain fraction of their output at procurement prices that were much lower than market prices. Second, peasants access to "free markets" was severely controlled and at times prohibited. Third, the movement and occupational choices of peasants was strictly monitored. Fourth, a political work points system infringed on the right of peasants either to sell or otherwise utilise their own labour. Finally the government infringed upon individual and collective property rights by forcing large numbers of peasants to work on various construction projects without payment.

When considering each of these points it is important to bear in mind the

distinction between property rights relating to agriculture (activities) on one hand, and the peasants (people) on the other. The first two points which Wills & Yang mention are about property rights in agriculture. The third, fourth and fifth point are about the property rights of the peasants such as basic economic and political freedoms. The sets of issues are not comparable. The specificity of Chinese agriculture means that the overriding task is to feed the people while property rights in agriculture are of secondary importance. From this perspective if the issue is whether private or public property rights are more appropriate, there is no reason to think that the former is more natural. In fact there might be good reasons for maintaining public ownership. The property rights of the peasants is a different matter. There is less justification for restricting their freedom of movement or other freedoms like occupational choices.

The rural reforms significantly improved the economic position of the peasants. Property rights however, were still not complete even after 1978 (Nolan 1993 and Perkins 1994). The responsibility system gave households the right to use specific plots of land from the late 1970s. The households were free (with the exception of grain until 1985) to decide what crops to sow and what animals to raise. The land was leased to households initially for 5 years but extended in 1984 to 15 years for annual crops and 50 years for tree crops, but leasehold interests could not legally be bought or sold. The government only officially sanctioned trade in long-term land leases in the early 1990s and this was restricted to urban areas (Perkins 1994, p.29). Nevertheless, the "right to use" could be transferred with a certificate from the government from 1986. The illicit transfer of land (with tacit government approval) was also common from as early as 1983 (Yang, Wang & Wills 1992). The responsibility system also gave households the right to appropriate the surplus from the land.

While households are required to deliver an annual quota to the government, beyond this they can keep what they produce. This can then be self-consumed, sold to the government or sold in the free market.

What role did the introduction of "partial" property rights play in the success of the initial reforms (1978-1984)? This is a debatable point. A number of commentators have played down the role which private property rights have played in China's economic reforms (see *eg* Deng 1993 and Naughton 1994b). Nolan (1993, 1994), for example, argues that China's rural reforms have been successful *in spite of* the failure to clarify property rights adequately. He points out (1993 p.71) that the "economy has performed extremely well" but then goes on to state (1993 p.74): "Instead of rapidly moving towards a system in which private property became a dominant form of ownership, China in the 1980s was committed to experimentalism and gradualism in ownership reform. In all important areas of the economy, transparent, legally protected individual property rights were the exception, not the rule. Public ownership with confused property rights was the norm". Others have emphasised that property rights are multidimensional. They consist of the right to use, the right to transfer and the right to appropriate (Cheung 1983 and Yang, Wang & Wills 1992). The argument is that each of these rights has to be considered. Thus, as pointed out above, while the right to transfer land was not legally recognised, the rights to use and appropriate the surplus did exist. The argument is that, in the early to mid-1980s, these "property rights", together with pricing reforms such as the elimination of mandatory procurement which expanded the rights of peasants to appropriate earnings from property, were important sources of institutional change.

An example of this latter approach is Yang, Wang & Wills' (1992)

empirical model. The model is tested using rural data for China from 1979-1987. Yang, Wang & Wills (1992) decomposes the property rights structure into three types of rights for four kinds of property. The types of rights were the right to use, the right to transfer and the right to appropriate the surplus. The kinds of property were goods, labour, financial assets and fixed assets including land. Based on the four types of rights and four kinds of property, Yang, Wang & Wills (1992) estimate twelve subindexes of efficiency in specifying and enforcing property rights. The subindexes are then assigned weights to derive an index of transaction efficiency in specifying and enforcing property rights. This index is used to run some regressions where rural income is treated as the dependent variable, while efficiency in specifying and enforcing property rights and the division of labour are the independent variables.

The empirical model "attributes *all* of the growth in per capita real incomes in rural China to increased efficiency in specifying and enforcing property rights and to increased division of labour, itself dependent on efficiency in specifying and enforcing property rights" (Wills & Yang 1993a p.57 emphasis mine). These results, however, most likely overstate the true position. The problem is that while Yang, Wang & Wills (1992) make rural incomes dependent on efficiency in specifying and enforcing property rights, the importance of property rights in relation to other potentially relevant factors such as green revolution technologies and pre-1978 accumulation (such as the wide-scale implementation of irrigation systems) in explaining changes in rural incomes is not investigated. While it is important to recognise the multi-dimensional nature of property rights, the broad definition of property rights in Yang, Wang & Wills (1992), together with the failure to include other



independent variables, implies that some of the explanatory force attributed to property rights might be due to other factors. This suggests that further empirical investigation is needed to be more definitive.

The reasons for agricultural growth slowing after 1984 are also controversial. One explanation for the slowdown in agricultural growth after 1984 stresses property rights. Feder *et al* (1992) argue that after instigating property reforms in the late 1970s the slowdown in growth occurred because the government did not press ahead with securing private property in the 1980s. Government control has prevented the concentration of land in private hands. The flip side of this is that significant redistribution of income occurs through public ownership. The view which articles such as Feder *et al* (1992) express is debatable, but there were two problems where property rights were potentially central.

First, the peasants were often not secure in government promises that they would be able to retain the land, even for the period of the leasehold. Perkins (1994) argues that this was an important reason why they were reluctant to invest in capital improvements, particularly land improvements such as irrigation systems, but Kung (1995) presents survey evidence which suggests that concerns along these lines might be overstated.¹² A second possible problem is that the concerns of peasants about the state's commitment to decollectivising agriculture manifested itself in a tendency to "mine" the land without regard to the medium to long-term fertility of the plot. Yang & Wang (1988), for example, point out that the use of chemical fertilisers increased dramatically after 1984 while the application of organic fertilisers fell significantly. The peasants' uneasiness that the agricultural reforms could be suddenly reversed were magnified given twists and turns of previous policy. Shi (1993, p.6)

provides a practical illustration of the uncertainty. He refers to a case where a local cadre placed his portrait in a peasant's house to indicate that the policies would only have effect as long as he was in power.

But there are also a number of reasons why agricultural growth might have slowed which are unrelated to property rights. These include an unfavourable shift in the terms of trade between agriculture and industry (see eg Watson 1994) and growing income disparity between rural and urban areas which, it is argued, impaired agricultural incentives (see eg Sachs & Woo 1994). There are also other potentially important reasons why most crop production had returned to its long-term growth rate by the end of 1984. Ash (1992), for example, points to a shortage of agricultural inputs after the initial surge in growth. Huang (1993) argues that this problem was accentuated by the preference of many farmers to invest in rural industry. Sicular (1992), on the other hand, places greater emphasis on the effects of price signals to producers which, she argues, were favourable in the initial reforms, but negative following the reassertion of government controls after 1985. All of these factors which have, to differing degrees, been important in explaining slower agricultural growth in the 1980s have a common theme. After 1984 the returns to agriculture declined relative to the alternatives for the peasants, especially T.V.Es.¹³

Thus, there is a clear difference of opinion. The more extreme critique of the property rights perspective argues that the success of the "partial" reforms can be attributed almost wholly to a range of disparate factors and that consequently the agricultural reforms were largely successful in spite of the property rights structure. This view, however, has its flaws to the extent that it overlooks that property rights are multi-dimensional. While somewhat impressionistic it seems that while the property rights argument places too much emphasis on the role of property rights the

extreme critique equally understates the role of property rights in the reform process. The answer lies somewhere in the middle. The implication is that most likely a range of factors, including property rights contributed to variations in agricultural performance, but this conclusion is subject to empirical verification and, thus far, the relative importance of traditional property rights explanations and other more general explanations is an empirical issue that the literature has not addressed.

2.3.2 Industrial Reforms

Overview of Reform Policies

The industrial reforms contained three main initiatives.¹⁴ First the profit retention scheme was introduced in 1979. It allowed profit making enterprises to retain part of their profits to set up three internal funds to cater for (i) production development, (ii) worker welfare and (iii) bonuses. The aim was to provide enterprises with greater incentives to make profits. Second the tax-for-profit scheme was introduced in two successive steps in 1983 and 1984 as an extension of the profit retention scheme. Its objective was to get enterprises to pay tax according to some pre-determined rates instead of remitting profits. In practice, however, the state had to introduce an "adjustment tax" which required enterprises to deliver part of their after-tax profits at negotiable rates. Third the focus of reform between 1987 and 1992 was the contract management system. It abandoned the pursuit of a single rate of state-enterprise division of profits. Instead it aimed to fix the base of tax-and-profit remittance and to retain extra-base profits in enterprises. Since 1993 the reform agenda has concentrated on the corporate reorganisation of S.O.Es - in particular transforming S.O.Es into limited liability companies either by grantee or shares, while retaining majority state ownership. This has focused attention on the management structure of S.O.Es and the role of

"privatisation". Two issues have been central in the debate (Bolton 1995). These are the separation of ownership and control in S.O.Es and the introduction of share markets and the emergence of stock offering firms.

Property Rights Issues

The reform of state enterprises has given a lot of attention to property rights. Property rights in S.O.Es, however, remain in a state of flux. The World Bank for example in 1990 referred to the fact that "[the] ownership of state-owned enterprises is becoming increasingly ill-defined" (World Bank 1990, p.149). More recently the comments of Jefferson & Rawski (1995, p.133-134) illustrate that the situation has not improved. "Chinese industry continues to operate in an environment of incomplete specification of property rights. Rules of commerce are neither clearly defined nor consistently enforced. Competing firms in the same industry or locality face widely differing legal, fiscal and regulatory regimes. Government intervention in business affairs extends well beyond the boundaries observed in even heavily regulated market economies. ... [This occurs] often with the effect of softening budget constraints". The same problems exist in the emerging stock market and stock offering firms (Chen 1994, Mookerjee & Yu 1995). "At the central government level there is no clear division of responsibility among different branches in the macro-management of stock market development. ... [At] the firm level enterprises do not assume standard practices" (Chen 1994, p.13).

The government has taken steps to clarify the relationship between the state and S.O.Es. The government announced a set of regulations in July 1992 which granted enterprises fourteen detailed rights encompassing a wide range of freedoms in enterprise management. The new stipulations delineate the legal status of the state owned sector and abrogate the subordinate role of enterprises to government administrative organs

(Cheng 1994, p.80). The government has also introduced a Company Law designed to encourage S.O.Es into the market and clarify their legal status (Mookerjee & Yu 1995). While the situation is changing these measures so far have had relatively little effect - soft subsidies and soft taxation (Kornai 1986) of state-owned firms are still common and until recently bankruptcy in the state-owned sector was relatively unknown.¹⁵

TABLE 2.2

Percentage of Industrial Output Produced by State, Collective and Private Owned Enterprises 1980 -1995 Calculated at Current Prices

	1980	1985	1990	1995
State Enterprises	76	64.9	54.6	30.9
Collective Enterprises ^(a)	23.6	32.1	35.6	42.8
Private Enterprises ^(b)	0.0	1.9	5.4	13.2
Other ^(c)	0.5	1.2	4.4	13.1

SOURCES: *Zhongguo Tongji Zaiyao* [A Statistical Survey of China](1996)

NOTES: (a) "collective enterprises" consists of urban and township-village enterprises. (b) "private" means private owned workers with less than eight workers. (c) "other" means private owned firms with more than eight workers, joint ventures, foreign owned firms and other ownership firms.

The growth in the industrial sector, nevertheless, has been significant. The state sector's share of total industrial output has fallen since the reforms began, but the expansion in the non-state sector has been substantial. This has occurred in spite of muddled property rights structures. Table 2.2 presents some statistics. The state sector was responsible for 76% of total industrial output in 1980. However, by 1995 that figure had fallen to 30.9%. Over the same period the share of industrial output produced in the collective sector increased from 23.6% to 42.8% and private enterprises increased their share from 0.0% in 1980 to 13.2% in 1995. The statistics for some of the coastal provinces in

eastern China are even more stark. For example, the state sector's share of industrial output in Jiangsu dropped from 34.3% in 1990 to 33% in 1991 and again to 25% in the first half of 1994. This compares with Zhejiang where the state sector's share of industrial output was 31.3% in 1990 and Fujian where it was 33.1% in 1992 (see Cheng 1994 p.80).

Jefferson & Rawski (1995) build on the contribution of McMillan & Naughton (1992) to explain the gains which Chinese industry has made in the absence of well-specified property rights. To do this, Jefferson & Rawski (1995) draw on the work on product ladders of Grossman & Helpman (1991) and attempt to apply it to Chinese industry. They argue that the growth in industrial output is due to intense competition between state-owned and non-state enterprises. This, they argue, erodes the profit base of state enterprises and marginalises quasi-rents in the non state sector, forcing both types of firms to become more innovative. They further argue that since profits are an important part of the tax base, a fall in profits lowers tax revenue and this hardens the government budget constraint. The government responds by reducing subsidies to enterprises which forces them to maintain the momentum of innovation.

However, this explanation leaves many questions unanswered. First, Jefferson & Rawski place too much emphasis on competition between state and non-state enterprises in the product market. Hussain & Stern (1995, p.159) point out that state and non-state enterprises are unevenly distributed and their performance varies widely across regions. Some of the most remarkable growth, for example, in non-state enterprises has occurred in the coastal regions and Special Economic Zones where state enterprises are thinly distributed. Jefferson & Rawski's explanation does not adequately address why this has occurred. Second, while the

government is starting to take a tougher approach to firms making losses, as noted above, the budget constraint is still soft relative to the standards of a market economy. The fact that there are still a number of state-owned firms which are making significant losses and which continue to be subsidised by the government is also overlooked by Jefferson & Rawski.

A possible reason why the industrial reforms, so far, have resulted in an expansion in output might lie rather in China's economic advantages, particularly relative to Eastern Europe and Russia (see Gelb *et al* 1993 pp. 411-416 and Nolan 1993). There were some important initial advantages. Nolan (1993 p.82) points out that, unlike the COMECON countries, China did not have to contend with the collapse of a system of international trade with which it was closely associated, nor did it have a large "monetary overhang" which gave monetary stabilisation a high priority in post-communist Europe and Russia. Another important factor is that China has experienced political and economic stability relative to the other transition economies. Political and military instability creates insecurity in property rights. The high degree of political instability (and in some cases, such as Armenia, military instability) is one of the major causes of the economic difficulties in Eastern Europe (see Ng 1995 p.28).

Nevertheless, factors such as these only tell part of the story. Another possible reason for growth in the industrial sector was the decision to decentralise government (see Qian & Xu 1993). This provided for local experimentation with various institutional arrangements which significantly increased the probability that efficient institutional forms could be discovered and adopted (see Chen 1993 and Qian & Roland 1994). The result was that some regions developed faster than others. There was also a flow-on effect. The decision to decentralise took full advantage of the close proximity of Hong Kong and Taiwan who both fuelled growth in

foreign capital and joint venture projects in the Special Economic Zones.

The rapid growth in output of foreign-owned and joint venture projects in the Special Economic Zones (which is as much as twenty times greater than state enterprises) created a ratchet effect which flowed through to other more slowly growing regions and sectors of the economy. This is not to imply that foreign capital and joint venture projects are necessarily more efficient than the state-owned sector. This is a controversial issue. The high growth rates in the Special Economic Zones may well, for example, stem from the substantial economic rents which foreign venture and joint capital projects reap from their geographical proximity to Taiwan and Hong Kong. The Special Economic Zones have also received preferential treatment from the government including important tax relief.

The success, or otherwise, of reforms in the state sector are open to conjecture. There are some commentators who strongly advocate that the reform process has been successful (see *e.g.* Jefferson & Rawski 1992 and Naughton 1995). There is some empirical evidence to support this view. While S.O.E share of industrial output declined, between 1978 and 1995 S.O.E output grew at around 7.5 percent per annum (China Statistical Yearbook 1996). There are also a number of empirical studies (see *e.g.* Chen *et al* 1988 and Jefferson *et al* 1992) which have found that total factor productivity increases in state enterprises have improved (usually in the range 2 to 4 percent annually -see Jefferson & Rawski 1994) since the reforms started. There are also studies, using various statistical techniques, which suggest a causal relationship between total factor productivity and efficiency in the state sector. Jefferson and Xu (1994) are representative. They rely on the observation that market forces tend to equalise financial returns to factors employed in different

lines of business. Their study suggests that there has been a convergence in financial returns to capital, labour and materials among large and medium S.O.Es and that this has improved allocative efficiency.

However, these results are controversial. Most of the studies investigating total factor productivity in S.O.Es have estimated gross production functions using input deflators. Woo *et al* (1994) argue that studies using this approach are plagued by methodological flaws which undermine their conclusions. Two issues cloud the measurement of total factor productivity: (i) the construction of appropriate deflators and (ii) whether "non-productive" capital and labour should be treated as inputs. Woo (1994) and Sachs & Woo (1994) refer instead to other statistical indicators, particularly the profit rate, which provide a different perspective on the success of state enterprise reform. Woo (1994) points to the extreme example of 1992 when industrial growth was 13% but according to the *China Daily* (Jan. 26, 1993) two-thirds of S.O.Es were making losses. While this represents a polar case the problems that it highlights still persist. The *China News Digest* (May 25 1994) presented statistics that, in early 1994, approximately 50% of state-owned enterprises were making losses.¹⁶ A report in *China Today* (June 1995 p.12) states that "more than a third of Chinese state run firms have admitted to being insolvent" and estimates that when allowance is made for "hidden losses" which are being concealed by creative accounting methods, as many as "60 to 70 percent of state firms are making losses".

There are a variety of reasons which may explain the low profitability of state-owned firms. Naughton (1991) suggests that the primary reason for the decline in profitability of the state-owned sector was increased competition from C.O.Es. The problem with this explanation, as Woo (1994) points out, is that the fall in profits occurred across the board even

in heavy industries where there was negligible new entry and in industries where prices did not fall. There are other, possibly more fundamental, reasons for the decline in profitability. For example Uehara (1995) suggests one reason is that most S.O.Es have outdated capital equipment. He also argues that the asset liability ratio is too high in most S.O.Es. The introduction of new tax laws, designed to harden budget constraints has been important. The added burden which tax reform has placed on the state-owned sector is illustrated by the observation that in 1993 S.O.Es paid 32.49 million yuan in tax. After the tax reforms in 1994 this amount rose to 51.36 million yuan (*China Today* June 1995 p.12).

A narrow focus on profits, though, also misrepresents the true picture. Lo (1997 pp.76-78) and Singh (1993 pp.25-26) point out that in 1991 losses in S.O.Es were concentrated in four industries. The four industries - coal mining, oil & gas, machinery, and textiles - accounted for 54% of the total losses in 1991. However the losses in coal and oil & gas were arguably due to the fact that their prices were artificially depressed under the plan track, as part of the dual track pricing system. The machinery and textile industries were, on the whole, subject to market prices but, in 1991, non-state losses in machinery and textiles were also substantial.¹⁷ The poor financial performance of both state and non-state enterprises in machinery and textiles was attributable to a market sales slump which particularly affected these two industries rather than enterprise efficiency.

The problems caused by ill-defined property rights might also be a relevant consideration in addition to the above factors. As discussed earlier Lee (1991 1993) and Cauley & Sandler (1992) point to a number of difficulties caused by an ambiguous assignment of property rights in state enterprises (see section 2.2.3). Lee (1993) argues that this has resulted in illicit collusion between the enterprise and local state agencies and between managers and workers that has hindered performance and

resulted in the appropriation of state property for irregular private benefit. The institutional basis of the stock market and emerging stock issuing firms also raises property rights issues (see Morris 1995). The capital market is still in an embryonic stage, but Chen (1994 p.13) points to a number of institutional irregularities. Two of the more serious irregularities are (i) many transactions are improperly conducted with no ownership or management right conferred and (ii) dividends are typically either not distributed or distributed in an inconsistent manner.¹⁸ Further development of the stock market might require attention to these issues. The government, nevertheless, is presently designing a Securities Law to address many of the difficulties (see *Beijing Review* July 31-Aug. 6 1995).

2.4 CONCLUSION

This chapter has considered four institutional perspectives and evaluated their relevance to the debate on post-socialist transformation. A general theme that runs through the chapter is that the existing literature is inadequate because, to this point, it is too general and conceptually ill-defined. This perhaps should not be surprising given that the institutional perspectives which are presented are concerned, on the whole, with other issues and only purport to deal with post-socialist transformation at a rudimentary level. Having said this, while the whole essence of the broader N.I.E is that institutions matter, N.I.E, in the manner it has been applied to post-socialist transformation has tended to under-emphasise, rather than stress, their fundamental role. The chapter has considered the difference between transition and transformation - "transition", in the literature, suggests transition to "complete" private property rights, while transformation suggests a process that is open-ended with some end state where something less than full private property is conceivable.

The property rights literature, discussed in this chapter, and the New Economic History, or at least Winiecki's interpretation of North, advocates transition. Two main problems are apparent with post-socialist transition: (a) This literature tends to assume rather than justify the need for full private property rights. The big bang literature, which falls within the property rights perspective, tends to advocate transition to a utopian textbook economy as the only desirable option. This overlooks the notion that different approaches might be valid (and needed) in different circumstances. (b) A related criticism is that the transition literature, in "imposing" full private property, also overlooks the potential relevance of path dependent pre-transformation institutions. This, particularly in the case of Winiecki's writings, seems rather perverse given the stress which North (eg North 1994) places on path dependent historical heritage. However, even the N.I.E literature which does not advocate post-socialist transition *per se* does not spell out how informal institutions might emerge in practice. And the gradualist perspective leaves the end-state to the market, assuming that the most efficient institutions will emerge.

The focus on a specific "textbook" model of capitalism also means that much of the transition literature coming from a property rights perspective treats the Chinese reform experience as an enigma. It was suggested in section 2.3 that arguments based on private property rights were relevant, among other factors, in explaining China's economic performance. However when arguments based on private property rights are marginalised as simply one relevant factor to consider, the traditional property rights perspective ceases to be a *theory* which can explain the transformation process. The problem is that merely listing a range of disparate factors, including private property, that are (or might be) relevant in the transformation stage is of little value. Thus, instead of

attempting to "fit" the Chinese reforms into traditional property rights stories where full private property rights are the goal, the challenge is to develop more general theories based on informal institutional responses.

CHAPTER 3

THEORIES OF THE FIRM AND THE RELATIONSHIP BETWEEN DIFFERENT PERSPECTIVES ON THE DIVISION OF LABOUR

3.1 INTRODUCTION

The last chapter suggested that in the Chinese case private property is reduced to one factor among many that potentially explain its high growth rate so that property rights cease to be a theory of transition. As a first step toward developing a rationale for different ownership forms, this chapter develops the idea that different theories of the firm reflect the heterogeneous nature of the division of labour. There are three main traditions in the theory of the firm. These are (i) the market paradigm which flows through papers such as Alchian & Demsetz (1972) and Jensen & Meckling (1976), (ii) the hierarchies rationale associated with Williamson and (iii) the collective learning paradigm which embraces various dissident perspectives. There is a tension in the existing literature between the market-hierarchies and collective learning themes. The extent to which the market and hierarchies paradigms, on the one hand, and collective learning paradigm, on the other, have universal application is not resolved. This chapter suggests a possible approach to reconciling the different traditions based on recent developments in endogenous growth. It will be argued that different trajectories - growth paths with substantive economic implications - underpin different perspectives on the division of labour. The two main traditions which will be considered are the detailed division of labour, first suggested by Adam Smith (1776), and the social division of labour, suggested by Karl Marx (1867).

The chapter is broken into five sections and is set out as follows. The next section provides a review of the main paradigms - market-hierarchies and collective learning. The similarities between the market and hierarchies rationales will be highlighted and these two paradigms will be contrasted with

collective learning. Section 3.3 will consider the main perspectives on the division of labour and point out how each perspective underpins a paradigm of the firm. This section will also highlight that each paradigm of the firm purports to have general application and that the limitations on each are not clear. Section 3.4 will suggest a possible solution through placing each paradigm in the context of different growth paths. The last section contains some closing comments and has some general observations on the chapter.

3.2 THEORIES OF THE FIRM

The Market Paradigm

Alchian & Demsetz's (1972) "classical capitalist firm" is the seminal contribution in the market tradition. The paper defines the firm as a nexus of contracts. This represents one possible solution to the incentive problems created by joint (*ie* team) production. The problem with team production, as Alchian & Demsetz point out, is that the individual marginal products of team members cannot be verified. An implication is that while returns to input owners are based on the joint product, the question of who shirks and by how much cannot be determined from the joint product. This creates a monitoring problem where shirkers do not bear the full social cost of their actions. "Viable shirking is the result" (Alchian & Demsetz 1972 p.81). The problem is to find a viable institutional arrangement that deals with shirking (see Foss 1994 pp.49-51). Alchian & Demsetz suggest that the answer is to assign to one member of the team the role of monitoring the labour inputs of the other team members. The argument, thus, is that this organisational setting will produce efficient monitoring. The monitor has an incentive to prevent shirking because he/she is given the residual claim to the profits from production.

The "nexus of contracts" literature treats firms as special kinds of market arrangements. Alchian and Demsetz see the firm and the market as

opposite sides of the same coin. Jensen & Meckling (1976), in the spirit of Alchian & Demsetz, argue that "the 'behaviour' of the firm is like the 'behaviour' of the market; *i.e.* the outcome of a complex equilibrium process" (1976 p.220). Cheung (1983), in a similar vein, states "we do not know what the firm is - nor is it vital to know" (1983 p.3) and "it is futile to press the issue of what is or is not a firm" (1983 p.18). The market paradigm claims to provide a general rationale for the firm. As Foss (1994 p.51) observes an implication of the nexus of contracts argument is that exactly the same analytical tools applied to the analysis of market allocation can be applied to the understanding of firms. This approach suggests that all contractual phenomena including the firm, defined in a broad fashion, can be understood in terms of utility maximising choices.

Thus, the nexus of contracts argument suggests that market forces will generate an optimal structure of property rights - "an optimal vector of contractual arrangements" (Foss 1994 p.52) - leaving hierarchy and authority without any real function. This, however, is the complete antithesis of the firm in the Coasean sense. First, Alchian & Demsetz (1972 p.784) insist that "longterm contracts are not the essence of what we call the firm". Second, their market approach denies justification of the firm as a relational contracting device designed to internalise the potential costs of incomplete contracts. Williamson (1981 p.1565) points out that Alchian & Demsetz cannot explain complex hierarchical firms, but more than this the market ontology which underlies the simple exchange paradigm denies the very existence (and value) of the firm as a hierarchical entity involving authority relations. The justification usually given for this is the classical defence, *viz* selection forces are invoked to explain the existence and persistence of efficient contractual arrangements (see *eg* Fama 1980 p.289 and Jensen 1983 p.331).

However, as Foss (1994 p.52) points out there is no theory underpinning

the selection forces that generate the contractual events theorised by the nexus of contracts literature. These forces are, instead, only ever invoked *ex post* and, as such, are a completely ad hoc defence. The focus on the market, characteristic of the nexus of contracts approach, is functionalist in outlook. The argument, that market exchange is the epitome of organisations is a manifestation of seeing exchanges along an institution free continuum. Equally problematic is their view of the market. Ultimately Alchian & Demsetz and Jensen & Meckling are just talking about individualistic rational choices plus the Walrasian market. The need for, and role of, institutions such as capital markets and markets for corporate control are ignored. There is nothing explaining how the market will find an optimal solution. Instead there is an implicit assertion that the invisible hand of market forces will find an optimal outcome.

A related criticism is that, far from being a universal explanation, the market paradigm is inconsistent with the historical evolution of the firm. Alchian & Demsetz provide two examples of technological change which they claim created a shirking problem and necessitated the need for monitoring. The two examples are the introduction of power loom weaving and the emergence of the modern assembly line (see Alchian & Demsetz 1972, p.784). However, Lazonick (1991) criticises Alchian & Demsetz on the basis that the two examples are historically inaccurate. With respect to the introduction of power loom weaving, Lazonick argues that each worker tended to his/her own loom so that it was easy to measure individual output. Hence, contrary to what Alchian & Demsetz suggest, Lazonick contends that the joint product problem was not an issue. Lazonick's view is supported by a number of studies of nineteenth century industry (see eg Pollard 1965, Landes 1969) which stress the

“radical changes in work organisation” (Dietrich 1994 p.52) associated with the transition from the “putting out” to the “factory” system as a stimulant to growth rather than the introduction of monitoring methods.

As for the assembly line example Lazonick argues that, if anything, the problem of assessing individual marginal products was greater before the introduction of the assembly line than it was after. The reason is that the assembly line confined individual workers to a single repetitive task and a single position on the shop floor. Thus if a given worker did not conform to the speed of the line, the supervisor could readily pinpoint the source of the slowdown (Lazonick 1991 pp.181-188) This suggests that Alchian & Demsetz (1972) place too much emphasis on monitoring problems. These observations also suggest that as a result, the exchange rationale for the firm is not a universal paradigm, but overstates the role of the market in the rise and consolidation of the managerial enterprise.

The Hierarchies Paradigm

Williamson provides a second rationale for the firm. He treats the transaction as the basic unit of analysis. Williamson suggests that economic institutions are determined by “the economising role of organisations” (Williamson 1985 p.xii). The aim of transaction cost economics is to “align transactions (which differ in their attributes) with governance structures (which differ in their cost and competencies) in a transaction cost economising way” (Williamson 1990 p. 67). There are different organisational forms because transactions have different dimensions. The principal dimensions are (1) the *frequency* with which transactions occur, (2) the degree and type of *uncertainty* to which they are subject, and (3) the condition of *asset specificity*. (Williamson 1985

pp. 52-63). Williamson makes two main assumptions. First, individuals behave "opportunistically" or with "self interest seeking guile". Second, economic agents are subject to bounded rationality. The first assumption is similar to neoclassical economics, but suggests "self interest seeking of a deeper and more troublesome kind" (Williamson 1989 p.138). Together the two assumptions suggest that economic agents disclose information in a selective manner often in ways intended to mislead and confuse. The result is that information is costly and distributed asymmetrically.

At first glance Williamson's approach seems to be quite distinct from the exchange paradigm. For example, his behavioural assumptions differ markedly from the exchange approach. However, on closer inspection, the break between Williamson and the market paradigm might not be as clear as it first appears to be. Williamson focuses on a market-hierarchies continuum which presupposes the existence of markets. In this respect his starting point is the controversial proposition that "in the beginning there were markets" (Williamson 1985 p.87). This perspective is debatable and has received extensive criticism on both historical and logical grounds (see eg Fourie 1989, 1993, Kay 1993, Sawyer 1993 and Hodgson 1993, 1996). The first set of criticisms suggests that it "ignores a crucial fact of history: hierarchical organisation forms and contractual arrangements in exchange predate the price making market" (North 1981 p.41). The second focuses on the fact that logically production must proceed exchange. As Fourie (1989 p.145) puts it: "Market relations are nothing but relations between already existing firms (or between such firms and their customers). Without firms that produce, there are no products to be transferred and allocated by market transactions".

A result of presupposing the existence of markets is that the firm is a

logical extension of the market rather than a separate learning process which differs from the collective learning paradigm. This reflects the Coasean perspective that the firm evolved in order to internalise, and thus economise on, the pre-existing costs of market transactions between individuals. This has meant that from the transaction cost perspective, the main topics of research have concentrated on the nature of the firm relative to the market. The firm, in this sense, is reduced to a collective learning free nexus of contracts in line with the exchange approach above. Moreover, Williamson sees the focus on inter-individual transactions, characteristic of the contracts approach, as a strength. He writes (1986 p.87) that "one of the attractive attributes of the transaction-cost approach is that it reduces essentially to a study of contracting".

Of course Williamson argues that, although hierarchies start with markets, their functions are different to markets. Hierarchies have the power to set (or at least influence) their planning environment. This is true, but the power to affect the environment, external to the firm, depends on decisions made at the managerial level (see Fourie 1993, Hodgson 1993, 1996). This is the whole basis of value creation within the firm compared with value allocation external to the firm (*ie.* in the market). This distinction is also the basis of evolutionary-historicist interpretations of the rise of modern capitalism (see *eg* Penrose 1980, Lazonick 1991) which stress that it is learning within the institution which drives economic development. Williamson's use of contracting, rather than decision making, though, extends the exchange based approach from the external market to the internal organisation. "The nature of the [Williamsonian] firm is understood through the prism of the market, which serves as the ultimate and overarching point of reference ... " (Fourie 1993 p.41).

Most of the similarities which Williamson claims between his own work and that of the "old institutionalists", such as Commons and Veblen, are superficial. Williamson often claims that he is following Commons in treating the transaction as the ultimate unit of analysis (see *eg* Williamson 1975 p.3), but Hodgson (1993) points out that for Commons the transaction is a "*unit of economic activity*" which is just one part of a cognitive whole. Another difference is that Williamson treats the unit of analysis as the abstract, atomistic and "opportunistic" individual. The "old institutionalists", on the other hand, stress the organic and collective learning characteristics of institutions, which is more akin to the cooperative learning literature below. Williamson's references to work on the historical rise of the firm, and in particular Chandler (*eg* Chandler 1977), are, in essence, superfluous to his basic approach. Williamson, when discussing Chandler's work focuses on transaction cost issues, but tends to disregard the broader emphasis which Chandler attaches to the firm's organisational abilities to innovate and learn. This is the central issue. However, because Williamson's framework is grounded in a transactions costs environment, it is blinded to the learning possibilities that strategic competition suggests. Bianchi (1995) makes the point:

"Williamson admits of course that vertical integration has an effect on market concentration. But [according to Williamson] this does not have any effect on the firm's organisational abilities, except by enhancing its monopolistic practices. ... The fact that firms, when facing strategic competition, are more than socially inefficient monopolies, completely escapes Williamson" (1995 p.188).

Williamson, like Alchian & Demsetz (1972) also argues that his approach provides a definitive or near definitive explanation for the firm. He states

(1986 p.131) "that the modern corporation is *mainly* to be understood as the product of a series of organisational innovations that have had the purpose and effect of economising on transaction costs" (emphasis added). There are at least two problems with claiming universality for the transactions cost approach. The first is that it ignores other perspectives on the firm - for example power and contested exchange (see Bowles & Gintis 1993). Second, Williamson ignores the potential existence of coordination failure in the exchange process. He sees firms as rational choice outcomes where hierarchies emerge from the market so as to economise on transaction costs. However, there is no guarantee that hierarchies will emerge if market coordination fails (see Stiglitz 1993).

The Collective Learning Paradigm(s)

Outside the (still) orthodox Williamsonian approach, several inter-related paradigms, which emphasise the collective learning attributes of the firm, have emerged. The search for a new collective learning perspective is likened in Best (1990) to a transition from the "old competition" to the "new competition". "The old competition is about ... managerial hierarchy, scientific management, and either vertical integration or 'arms length' market oriented supplier relations" (1990 p.251). "The new competition", on the other hand, "is attacking the base of this whole superstructure: the production unit, its organisation, and internal governance structure" (1990 p.252). The "new competition", in its broadest sense, encompasses a range of theoretical perspectives - flexible specialisation, the techno-economic approach and the literature on the Japanese firm (J-mode).

The flexible specialisation literature stresses the importance of decentralised networks as a vehicle for cooperative learning. The literature on industrial districts (eg Courault & Romani 1992, Lorenz 1992) focuses on two aspects of cooperation. The first is the provision of

collective goods such as training, education and research and development. The usual practice, in industrial districts, is for these to be provided through the auspices of some local institution: business association, trade union or regional government. The other form of co-operation takes the form of adherence to a set of norms of reciprocal behaviour. This includes sharing of technical information, subcontracting out to less successful competitors and refraining from wage competition and labour poaching (Lorenz 1992 p.195). The essential element driving industrial districts is cooperation. This is because reciprocal sharing serves the dual role of reducing the risk associated with investing in new products and discouraging strategies, which have the potential to be against the mutual interest of the parties, such as wage competition.

This perspective, in its more general form, expressed in, for example, Piore (1992) comes close to the new techno-economic paradigm in *inter alia* Freeman & Perez (1986) and Dosi (1988). This latter approach studies the characteristics of technical change and the innovative process. The literature, in doing this, draws an essential distinction between *information* and *knowledge* (see Dosi 1988 pp.233-234). The market provides information, but problem solving activity involved in search and discovery is based on competences, "visions" and heuristics which are a logical precondition to processing information into knowledge. When the innovative process is exploratory it is argued that the market is unable to direct the emergence and selection of radical technological discontinuities. While this approach denies the ubiquitous existence of the market, it stops short of ruling out a role for the market altogether. The new techno-economic paradigm instead attempts to combine market incentives with organisational learning in order to generate an evolving innovative climate. Economic opportunities, growing out of technological progress created through continuous breakthroughs in

scientific exploration, are localised via in-house research and development. The collective learning process, in this sense, involves various forms of "institution specific accumulation of competences" (Dosi 1988 p.234). This suggests that, compared with the nexus of contracts view of the firm in Alchian & Demsetz (1972) and Jensen & Meckling (1976) and the Williamson hierarchical firm, the techno-economic approach is consistent with seeing the firm as a separate cognitive entity rather than a mere extension of the market (see eg Dosi 1984 chap. 2).

The literature on the Japanese firm (J-mode) represents a third strand in the collective learning theme. This approach stresses the relevance of horizontal co-ordination among operating units and sharing of *ex post* on-site information - *ie.* learned results. This differs from the emphasis placed on vertical information flows and skill specialisation in the literature on the stylised American firm (A mode). The main features of the (simplified) J-mode are depicted in Aoki's (1990) three duality principles.¹

- (i) The first principle states that the J-mode, compared with the A-mode, is less hierarchical in co-ordination, but relies more on hierarchies in incentives. Within the co-ordination sphere the sharing of information in the J-mode is multi-faceted. The indicative framework of operations is set out in prior planning, but as new information becomes available in the implementation period prior plans might need to be modified. This involves close co-ordination between different units in the production chain (captured in the *kaban* [just-in time] method) and different functional divisions in the firm. The enterprise, in this sense, cultivates a learning and development culture where ideas for improving plant site methods come straight from the shop floor (Freeman 1988). The manipulation of *ex post* on-site information in order to generate information value is akin to the notion of "using the factory as a sort of laboratory" (Baba 1985).

The second aspect of Aoki's (1990) first principle relates to hierarchies in ranks. The A-mode tends to be more consistent with a decentralised market approach to incentives in which short-term labour contracts are common. The J-mode, however, sees the relationship with its workforce as a long-term commitment on both sides. This facilitates the use of hierarchies as an incentive mechanism. There are separate rank hierarchies for blue collar and white collar workers. While each worker enters at an identical starting point (subject to educational credentials), progression up the "workplace ladder" will occur at different rates. The criteria for promotion are period of service and merit. The latter is not dependent on performance in a specific job, but takes into account a broad range of factors which are needed in the J-mode organisational sphere such as problem solving abilities and organisational skills. The incentive scheme, in this sense, complements the organisational objectives of the firm and contributes to the cooperate culture theme.

- (ii) Aoki's (1990) second principle suggests that there is a close symmetry between the internal organisation and financial control of the J-mode. The relationship between the J-mode and its banks involves a long-term commitment. The banks are prominent shareholders in, and an important source of capital for, the J-mode which tends to be debt dominated. The banks' long-term commitment to the J-mode serves two inter-related roles. The first purpose is expressed as bearing the firm's risk. This arises because, given that a large proportion of the equities held by banks and other corporate entities are extremely stable, the management of Japanese firms are insulated from takeover raids in the open market.

The second aspect relates to the exertion of control over the firm. Where the J-mode makes profits which are considered reasonable the banks will not interfere with the management of the firm. However, if profits fall

below a satisfactory level the main bank (*ie.* the major shareholding bank in the firm) will exercise explicit control over management and operational issues. The potential threat of bank intervention in the operation of the firm acts as a strong incentive to the "workplace ladder" to perform. The relationship between bank and firm, therefore, complements the internal rank hierarchies which, Aoki (1990) claims, is conducive to incremental innovations in the J-mode. There is, though, a potential cost in this process in terms of allocative efficiency. Lo (1997 p.19) points out that where the risk bearing and control functions of the bank are asymmetric, the firm benefits from some degree of soft budget constraint. This suggests that *ex ante* management might not feel as responsible for the risk associated with its decisions compared with the A-mode. If this is the case, the debt dominated capital structure of the J-mode, whilst being conducive to collective learning, might not prove as allocative efficient.²

- (iii) Aoki's (1990) third principle builds on the second. Aoki (1990) suggests that the corporate management decisions of the J-mode are subject to the dual control (influence) of financial and workers interests rather than unilateral control of shareholders. The J-mode is better seen as "a community of people"³ than as capital owned by the shareholders. The importance of the banks is discussed above. The J-mode's workers exert influence via the collective learning perspective. Aoki (1990 pp.18-20) argues that the workers, as a group, are assets-specific to the internal network. The language of networks, here, links with the wider literature - *ie* outside of the literature on the J-mode - on incremental innovation (see *eg* Best 1990 chap. 9, Dietrich 1994 chap.9). The J-mode, in part because shareholders are seen more as a group outside the firm and, in part because of the long-term commitment of the banks, also tend to have a longer investment horizon. The management's objectives, consistent with its dual obligations, focus on long-term growth and

maintaining workers' earnings. This contrasts with the shareholder controlled A-mode which is more accountable to its shareholders and, therefore, more concerned with creating share value in the short-term. The longer investment horizon, with a stable managerial environment discussed above, is an important stimulant to incremental innovation.

3.3 PERSPECTIVES ON THE DIVISION OF LABOUR

There are two main perspectives on the division of labour. The first is the detailed division of labour. This notion originated with Adam Smith's (1776) example of the transition from pin craftsman to pin factory. This is developed in the proposition that the division of labour is limited by the extent of the market. The main link papers between Adam Smith (1776) and modern exchange perspectives are Young (1928) and Stigler (1951). The social division of labour, on the other hand, is grounded in Karl Marx's (1867) writings. The significance of the two forms of division of labour lies in the difference in the economic relations that each involves. The detailed division of labour refers to the hierarchical relationship between labour and capital within the firm. The social division of labour refers to the relationship between capitalists in competition as independent producers (Fine 1982 p.41). At a more abstract level the social division of labour has a cognitive basis. Here, conception and execution are integrated and innovations are achieved "through the tension between a deepening of understanding within a given cognitive frame and the pull to reintegrate back into a different frame in order to produce a sellable commodity" (Piore 1992 p.169). At this abstract level the social division of labour, is reflected in the collective learning theme.

Proposition 3.1:

There are logical links between concepts of the division of labour and theories of the firm. The detailed division of labour underpins the market-hierarchies paradigm. The social division of labour underpins the collective learning paradigm.

The market paradigm makes the detailed division of labour the centre-piece of the explanation, while the relevance of the social division of labour is not addressed at all. This is made explicit in the new classical microeconomics literature, which sets out with the express goal of modelling Young's (1928) views on the division of labour (eg Yang & Borland 1991, Yang & Ng 1995). The detailed division of labour is treated as a defining trajectory. The problem, however, with this view is that it does not give sufficient weight to collective learning stories. Piore (1992), writing in relation to the Chicago growth theories, makes a similar point. Piore states "[Chicago] need not as a matter of logic, of course, join the whole debate; it could simply assert that there is a single trajectory [i.e. the detailed division of labour] with the properties for which it is looking But given the extensive literature about network structures which is now developing, this may be a little harder to do than it was in the past." The same criticism could be made of the new classical microeconomics and, in a broader sense, the market rationale for the firm.

The flexible specialisation approach, on the other hand, posits that the social division of labour, and not the detailed division of labour, is the engine of growth. The flexible specialisation literature suggests that the "technological dynamism" which grew out of the famous industrial districts of the nineteenth century - silks in Lyon, cotton goods in Philadelphia, edge tools in Sheffield *etc* -was the driving force behind economic development, rather than the technical characteristics, underpinning the

detailed division of labour, depicted in the mass production literature. However, while most of the initial work in this area was confined to explaining economic performance in specific industrial districts such as the literature on the so-called "Third Italy" (see *eg* Beccatini 1990, Capecchi 1990), the argument is extended in later writings to encompass a more general paradigm. Piore (1992 p.160), for example, suggests networks are "often appropriate not only to organise relationships among small firms, but also to structure the relationship among the internal units of large corporate enterprises and between the corporation [its] suppliers [and] customers" These comments raise the issue as to what extent the flexible specialisation approach purports to be a general paradigm. There is a tension in the flexible specialisation literature between theorising from specific examples and *a priori* general reasoning.

The extent to which the techno-economic approach is a general paradigm is also not clear. While the flexible specialisation and techno-economic approaches are similar in perspective, their origins differ. The flexible specialisation approach, as discussed above, reasons from the experience of specific industrial districts. The attempt to generalise from empirical observation through, for example, building on Marshall's discussion of "industrial districts" in his *Principles of Economics* (Beccatini 1990) is a recent development. The techno-economic paradigm, on the other hand, developed as a general alternative to then extant theories of technical change. The techno-economic perspective develops a conceptual framework which *starts* from the economics of technical change (Dosi *et al* 1990 p.x-xi). This is depicted as having wide application in writings in the techno-economic mould (see Dosi *et al* 1988). Freeman (1987,1988), for example, studies Japan as "a national system of innovation". Nelson (1988) and Teece (1988) suggest that the United States "innovative process" can be studied in much the same

manner. The industrial revolution and the emergence of the United States and Germany as economic superpowers have also been explained in terms of a techno-economic perspective (eg Freeman & Perez 1986).

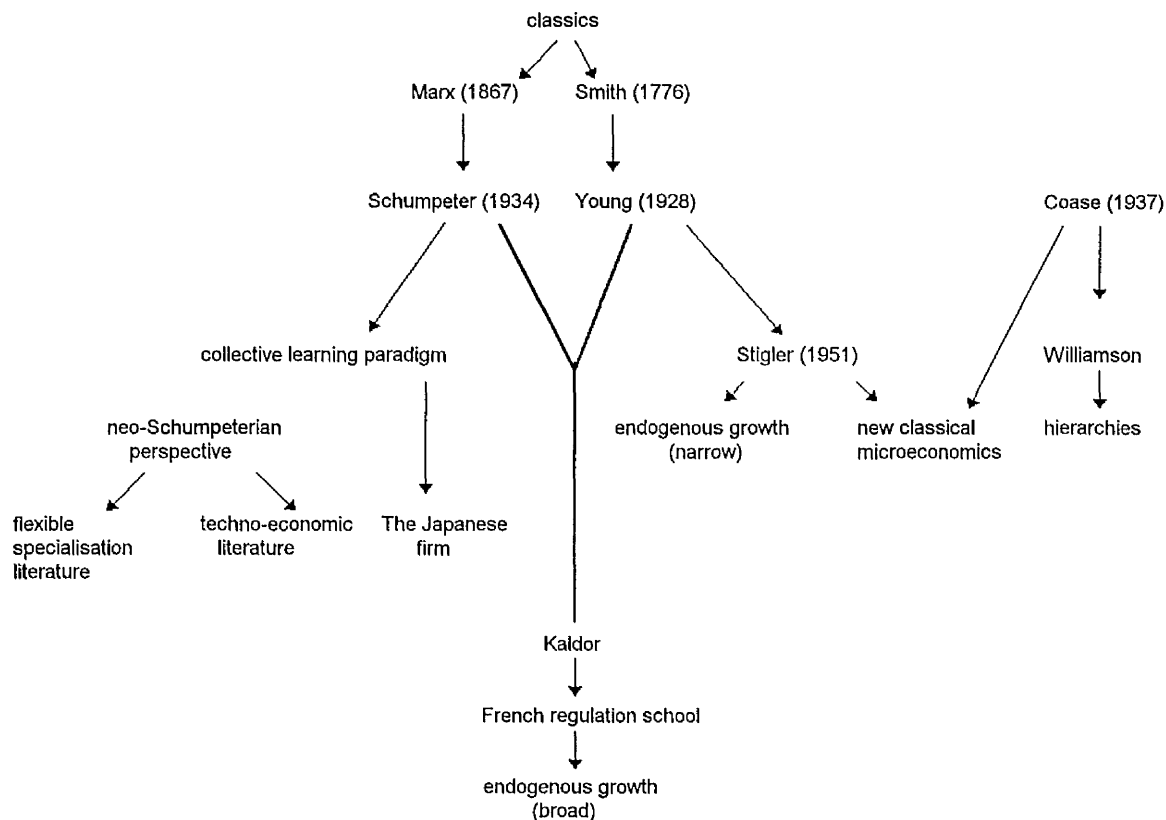
The importance of networks relative to hierarchies as a general explanation for the firm, and the inter-relationship between the two, is an unresolved issue within the flexible specialisation paradigm. The techno-economic approach, like flexible specialisation, stresses the importance of networks in co-operative learning. However, also consistent with flexible specialisation, it is not clear what room this approach leaves for market-hierarchies rationales for the firm. This is an issue not addressed in the literature. Most techno-economic studies do not even mention Williamson or Chandler, let alone pure exchange theorists such as Cheung.⁴ Nevertheless, although it is not clear whether the flexible specialisation and techno-economic approaches claim to be a general paradigm, new classical microeconomics, within the market paradigm, sees its explanation as having universal application. Yang (1994), for example, argues that the new classical perspective on the division of labour can explain differences in socialist economies. Ng & Yang (1995), in a similar fashion, claim that the detailed division of labour can explain growth patterns in Song China (960-1279 A.D) which existed about eight hundred years ago. The purported scope which each paradigm claims to have raises a tension as to the extent to which market-hierarchies and collective learning represent general explanations for the firm and, related to this, the relationship between the detailed and social divisions of labour, which the existing literature does not resolve. The next section suggests a possible synthesis through developing the idea that different trajectories reflect the heterogeneous nature of the division of labour.

3.4 TOWARDS A POSSIBLE SYNTHESIS

While the flexible specialisation and techno-economic approaches do not spell out the relative roles for networks and hierarchies within their respective paradigms, the literature on the Japanese firm is more clear (see Aoki 1989, 1990, Itoh 1987). Aoki (1990 pp.8-9) suggests that a trade-off exists between specialisation and collective learning. The A-mode has two essential characteristics: hierarchical separation between planning and implementation and an emphasis on economies of specialisation. However, in the J-mode, some economies of specialisation are sacrificed in the search for a cooperative culture. Whether it is worthwhile sacrificing economies of specialisation, in order to facilitate collective learning, depends on the planning environment. When it is stable, learning at the operational level might not add much information value to prior planning. Moreover, at the other end of the scale, when the planning environment is volatile, decentralised adaptation to environmental changes might cause results which are unstable. Aoki argues, in these two cases, that economies of specialisation outweigh economies of collective learning and the A-mode is appropriate. The J-mode is appropriate in the intermediate case where the planning environment is subject to continual change, but the change is not too drastic. In this case the argument is that the information value created via collective learning and horizontal co-ordination more than compensates for the loss of efficiency due to sacrificing operational specialisation.

Proposition 3.2:

The two concepts of the division of labour are reflected in different patterns of growth. The "narrow endogenous growth" treats the detailed division of labour as a defining trajectory. The "broad endogenous growth", on the other hand, can accommodate both the detailed division of labour and the social division of labour.

FIGURE 3.1**Schematic Representation of the Historical Links in the Division of Labour**

Aoki's (1990) propositions can be generalised through looking at the division of labour. To this end the market-hierarchies and network stories can be placed in the context of different patterns of growth.⁵ The literature on endogenous growth provides a means to do this. A schematic representation of the main perspectives on the division of labour is presented in figure 3.1. This table sketches (in a simplified form) the manner in which the detailed division of labour and the social division of labour have been evolved in the literature. There are two strands of endogenous growth depicted in figure 3.1. The "narrow" endogenous growth reflects Adam Smith's detailed division of labour. This strand adopts a similar perspective on the division of labour to the new classical

view, within the market paradigm, and can, like new classical microeconomics, be traced back via Young (1928) and Stigler (1951) (see eg Becker *et al* 1990, Jones & Manuelli 1990, Rebelo 1991). The narrow endogenous growth, however, tends to assume perfect competition and constant returns. At most it allows for increasing returns at the industry or economy-wide levels and even here it still assumes perfect competition or at least price-taking behaviour. This means that its models cannot capture the importance of technological progress in the growth process.

The "broad" endogenous growth, on the other hand, casts industrial innovation as the engine of growth (see eg Romer 1990, Grossman & Helpman 1991). Thus, there are two main differences between the broad and narrow perspectives. The first is that the broad approach models the endogenous component of technological progress as an integral part of economic growth. The second is that the broad approach has discarded perfect competition, working instead with models of monopolistic competition in the tradition of theorists such as Dixit & Stiglitz (1977). It is arguable that the broad view incorporates aspects of different technological trajectories in the sense that term is used in the collective learning literature - *ie* as a growth process with substantive implications for economic structure (see Dosi 1984, Piore & Sabel 1984, Piore 1992).

When compared with the broader approach, the problem with the narrow approach to modelling endogenous growth is that it defines the detailed division of labour as *the* technological trajectory.⁶ The narrow approach then assumes that this process is consistent with a competitive economic structure and that the concern is with modelling that process as a kind of "general equilibrium growth" (Piore 1992 p.162). *Contra* the narrow approach, the broad approach to endogenous growth does not treat Adam Smith's views on the division of labour, as interpreted by Young

(1928), as a defining trajectory. The attempt to model endogenous technological process in the broader tradition as an essential component of growth recognises the wider concerns that Young (1928) had about general equilibrium theorising. Young (1928) protested that general equilibrium modelling could not capture the essence of economic progress - increasing returns - which he saw as a process of change (see Blitch 1983). The same concern is reflected in Kaldor's writings which drew inspiration from Young (1928).⁷ Kaldor (1972) makes the point:

"The difficulty with a new start is to pinpoint the critical area where economic theory went astray. In my own view, it happened when the theory of value [*ie.* neoclassical theory of price determination] took over the center of the stage - which meant focusing attention on the *allocative* functions of markets to the exclusion of their *creative* functions - as an instrument for transmitting impulses to economic change" (Kaldor 1972 p.181 emphasis in original).

This passage, which comes close to Schumpeter (1934), raises some of the main concerns expressed in the collective learning literature - in particular that market-oriented paradigms do not recognise the importance of value creation. There is one possible reservation on this point which is raised in Lazonick (1991). The existence of increasing returns or endogenous technical change, in the Schumpeterian tradition, are not necessarily confined to the economy-wide level. The "neo-Schumpeterian" perspectives in figure 3.1 (the flexible specialisation and techno-economic paradigms) stress the importance of continuous innovations within the firm. Kaldor, however, in the above passage, refers to the creative function of *markets* not firms, but this can be explained on the basis that he wasn't considering whether increasing returns result

from organisational co-ordination or market regulation. Rather he talks about the influence of macro conditions on micro-efficiency *on average* while leaving out the diverse capabilities of firms to seize opportunities.

The main point is that Kaldor highlights an important feature of Young's (1928) paper which is the need to see endogenous technological progress as an evolving process. This is ruled out in the narrow endogenous growth because *the* technological trajectory is modelled as a general equilibrium process. The broader approach, however, because it adopts imperfect competition and focuses on endogenous technical change, provides the basis for a wider alternative trajectory based on aspects of the social division of labour - *ie.* treating endogenous innovation as a cognitive whole - which flows down from Marx through Schumpeter and Kaldor. Wulwick (1993) looks at Kaldor's growth model in the context of writings on endogenous growth. She suggests (1993 pp.338-339): "The things that the new growth theory discusses - path dependence, endogenous technology, manufacturing as an engine of growth, complementarities and so on - all appear in Kaldor's insightful, ingenious, iconoclastic essays in one form or another. Thus it may seem surprising that Kaldor's growth theory has been ignored by the new growth theorists". The first sentence is still true. However, the second sentence while true in the past, is perhaps not as apt now as it once was.

The reason is that there are now some papers which are starting to draw out the links between Kaldor and Schumpeter, on one hand, and the broader endogenous growth, on the other, at the level of formal modelling. Kurz (1991) and Bertola (1994), for example, both draw parallels between trends in the broad endogenous growth and the post-Keynesian growth literature at the formal (mathematical) level. Aghion & Howitt (1992) attempt a similar marriage between Young, Schumpeter and

the broad endogenous growth. There is a similar appreciation for the historical basis of the broader endogenous growth in their latter paper - Aghion & Howitt (1994). Aghion & Howitt (1994) survey the broader endogenous growth in the context of the wider industrial organisation literature. Their main contribution is to point to a growing literature, in the broader mould, which might be traced back to the ideas discussed in Schumpeter. This broader literature, consistent with Schumpeter, is starting to look at the microeconomic underpinnings of technical progress at the level of the firm (see also Solow 1991 pp.410-411, Azariadis 1994).

The broader approach to modelling endogenous technological change is moving more towards the growth process envisaged in the collective learning literature. The trend towards a convergence is also reflected in recent reflections in the broader endogenous growth which adopt some points stressed in French regulationist writings - see, in this respect Boyer & Petit 1991 who provide a regulationist (formal) interpretation of Kaldor. The regulationist perspective provides a related vision of a technological trajectory rooted in natural evolution which is the inspiration for the flexible specialisation and techno-economic paradigms. These views can also be traced back through Kaldor and Young to Smith (see figure 3.1).

The point where the flexible specialisation and regulationist perspectives meet is where institutions and technical change converge as the mechanisms driving economic development. The narrow endogenous growth provides one possible trajectory which exists along a steady-state or consistent growth path, but the use of a Cobb-Douglas production function means the narrow trajectory does not need to confront the existence of multiple stationary points. The existence of multiple equilibria, however, is an interesting feature of models with increasing returns. It opens up the possibility that history matters, so that where the

process ends up depends on where it starts. This is a theme stressed in the collective learning paradigm and, in particular, in the sub-literature with a Marxian theme (see *eg* Piore & Sabel 1984). The broad endogenous growth, on the other hand, treats the market structure as endogenous. This provides a means to model multiple growth paths (see *eg* Azariadis & Drazen 1990). It also allows for the existence, in some broad variants such as the patent race model, of indeterminate solutions and welfare outcomes which are difficult *ex ante* to predict (see *eg* Dasgupta & Stiglitz 1988). The literature constructing formal models using the principle of economic selection is a related development (see *eg* Silverberg 1988, Silverberg *et al* 1988). This approach goes beyond models such as Romer (1990) and abandons market equilibrium *in toto*.

Proposition 3.3

Steady-state and multiple growth paths are associated with different market structures or forms of competition. A steady-state growth path is reflected in a stable market structure or static competition. The existence of multiple growth paths is consistent with an unstable market structure and dynamic competition.

The notion that the narrow and broad endogenous growth reflect different concepts of the division of labour sets up a more general approach to evaluate Aoki (1990). The attempt to model path dependence in the broader endogenous growth provides for both stable and unstable planning environments in the sense that those concepts are used in Aoki (1990). A possible approach along these lines is to think about different forms of competition. The notion of a planning environment suggests imperfect competition - *ie.* that firms, to differing degrees, have the power to affect their external environment. This raises the issue of what firms are planning when the external environment is "stable" and "unstable"? The concept of a stable planning environment seems consistent with a

stable market structure or static competition. A good example of static competition in the sense it is being used here is the United States steel and automotive industries in the 1950s and 1960s where high barriers to entry gave producers substantial market (and planning) power. The concept of a planning environment which is unstable, however implies dynamic competition in the Schumpeterian sense. There is dynamic competition because firms with early entry earn co-operative rents through continuous innovation and collective learning. However, the planning environment is unstable because barriers to entry are low. This means that firms earning supra-normal profit are under continuous threat from outside the industry as depicted in Dixit & Stiglitz (1977).

These observations appear consistent with the suggestion in Piore & Sabel (1984) that the hierarchical mode of production based on the detailed division of labour which epitomised many United States industries (such as steel and cars) until the late 1960s lost its advantage when confronted with product variation and weakened oligopolistic control. Taking this a step further, the concepts of static and dynamic competition are similar to the notions of steady state and transition growth paths in the broader literature. The model developed in Lombardini & Donati (1994) illustrates the relationship. It is in the broad endogenous growth mould and distinguishes between a steady-state growth path which is likened to "an ideal asymptote of evolution" and a series of "transition growth phases". The steady-state path is characterised by static competition - *ie*, a stable planning environment. "At a certain moment in time, if we look at the economy", write Lombardini & Donati, "we see monopolies and oligopolies" (stable market structures). However "if we observed the evolution of the economy, [dynamic] competition appears as the essential feature of economic progress. In the asymptote

of evolution, in fact market power disappears" (1994 p.202). This last passage, which refers to the "transition phase" is consistent with an unstable planning environment where there is continuous innovation.

When Lombardini & Donati suggest that "market power disappears", in effect what they mean is that firms do not have the same power to influence their planning environment. This creates a situation in the "transition phase" where growth is being driven by the repeated creation (and erosion) of economic rents *ie.* the planning environment is unstable. The term "transition phase" is used in Lombardini & Donati, but this phrase needs to be interpreted cautiously. There might be a number of trajectories, at a given point in time, consistent with the processes which fall within dynamic competition, so that the concept is anything but transitory. These trajectories are specific patterns of organisational innovation which co-exist with steady state growth paths, rather than short-lived "transitory" phenomena. The process of innovation through networks, in this sense, becomes embedded in the industrial structure.

An important point is that the concept of stable and unstable planning environments does not correspond to whether the growth process is in or out of equilibrium at a given point in time. This would be a sterile distinction without much practical relevance. The distinction, instead, is between a steady-state growth pattern consistent with perhaps the long-run growth path and a growth path where multiple growth patterns are pervasive. The "general equilibrium" "perfect competition" trajectory suggested by the narrow endogenous growth can accommodate the first growth path, but it cannot accommodate the second. However the broad approach, because it makes an attempt to deal with multiple stationary points, encompasses both cases. Viewed in this manner the narrow

growth trajectory, associated with a consistent growth path becomes, in effect, a subset of a more general broad growth trajectory which allows for both consistent and path dependence affected patterns of growth.

The attempt to cast the broad endogenous growth as a wider trajectory has its shortcomings. The new growth models have a number of limitations. However, just two problems will be mentioned here which have particular relevance when thinking about building a wider growth trajectory. First, on the one hand, the attempt in the broader literature to incorporate different aspects of innovation into a microeconomic framework adds to the level of realism, in particular, relative to the narrow endogenous growth. The specifications used allow for some of the main characteristics of technological change (*eg* cumulateness). However, on the other hand, the fact remains that these models are still very stylised. The stilted nature of the modelling exercise makes it difficult to capture the full effects of collective learning as an evolving process.

Second, the implicit assumption in endogenous growth models of rational technological expectations is also open to debate. The problem is that investment in research and development is a future oriented endeavour which is imparted with imperfect information and uncertain results. The implication of rational expectations that, at least at some level, entrepreneurs have a perfect understanding about the functional form of aggregate technology is tantamount to assuming away a large part of what endogenous technological change involves (see Aghion & Howitt 1994). The assumption of rational expectations also gives some of the models strong equilibrium properties. This assumption is criticised in techno-economic writings as inconsistent with the depiction of growth as a disequilibrium process (see *eg* Dosi *et al* 1988). This does not affect attempts to construct a trajectory based on patterns of growth in multiple

equilibria *per se*. However, in truth, any attempt to construct a generalised trajectory from stationary points is a surrogate for examining the different (disequilibrium) growth patterns which underlie them. Thus, in a broader sense, the rationality assumption runs counter to the concept of a generalised trajectory that purports to capture different patterns of growth.

Having said this, there is a literature which is attempting to incorporate the concept of bounded rationality into growth models (see *eg* Silverberg 1988, Silverberg *et al* 1988). This is closely related to the economic selection approach mentioned above. The broad approach to endogenous growth provides the basis for thinking about a different trajectory, but it is likely that the economic selection literature being developed by Dosi, Silverberg *et al* will provide the best mechanism for taking this concept further. The economic selection approach is still in its early stages. There are, therefore, refinements to be made, but it has the attraction, relative to most of the endogenous growth literature, that it has the mathematical framework to generalise out of equilibrium growth.

This leaves the issue of whether the collective learning and market-hierarchies paradigms can be considered in the context of these different trajectories. The above arguments regarding trajectories, of course, are far from conclusive. They represent a starting point for thinking about a more general framework. However, if the idea of different trajectories is accepted, the new classical view of the division of labour - *ie.* the detailed division of labour - seems compatible with a narrow trajectory or steady-state growth path. This links with the rationale for the firm. There are two Coasean traditions which seem compatible with the detailed division of labour. The first is the pure market paradigm in Alchian & Demsetz (1972) and Jensen & Meckling (1976). The second is the hierarchies rationale suggested by Williamson. The pure market approach stands or

falls with the detailed division of labour. The link between the detailed division of labour and the pure market rationale for the firm, for this reason, is fairly straightforward. The extent to which the detailed division of labour supports the hierarchies rationale is more controversial, but when it is seen as a logical extension of a nexus of contracts the detailed division of labour provides the basis for the hierarchies paradigm.

Nonetheless, constructing a classification like figure 3.1 involves taking some liberties. The search for common themes, based on the division of labour, means that simplifications are inevitable. It would be wrong to suggest that the different groupings, in figure 3.1, were discrete categories with no overlap or that hierarchies had no collective learning function. The point being made is not that hierarchies do not have collective learning attributes or even that hierarchies do not perform functions, which are distinct to the market, in terms of value creation, but rather, that the hierarchies rationale, *in the Williamson tradition*, is a logical extension of the market and therefore, in common with the pure market tradition, can be supported by the detailed division of labour. It might be objected, quite rightly, that Williamson's writings, distort the broader rationale for, and role of, hierarchies. The classification in figure 3.1, is, for this reason, a stylised representation of what, in fact, exists. However, Williamson has been extremely influential so that, on balance, it is submitted that the benefits to be had from a classification like figure 3.1, as far as drawing historical linkages, outweigh its shortcomings - *ie.* depicting what are complex issues in rather black and white terms.

The broader trajectory which is, in essence, a series of trajectories provides a potential framework to consider both market-hierarchies and collective learning. The broader trajectory is consistent with seeing the firm in an evolutionary context where different growth patterns (stable and

unstable) are possible. This allows for various "technological competences" (Dosi 1988) or "innovation avenues" (Sahal 1985) which are grounded in the social division of labour. The social division of labour, in this sense, can support the existence of networks conducive to collective learning. This corresponds to Aoki's (1990) intermediate case - gentle change in the external environment. The broader trajectory because it does provide for different growth paths, can also accommodate scenarios where the detailed division of labour is pertinent - *ie.* "stable" and "volatile" external environments. And the detailed division of labour, as discussed above, can support the market-hierarchies rationales.

3.5 CONCLUSION

This chapter explored the tension between the collective learning and market-hierarchies explanation for the firm. It is not clear, from the wider collective learning and market-hierarchies literatures, what role exists for the different approaches. The chapter suggested that this reflects the fact that each paradigm is premised on a particular conception of the division of labour, but, at the same time, does not recognise that the division of labour is multi-faceted. The chapter suggests that one possible approach to reconcile the various rationales for the firm is to place them in the context of different growth patterns which support different conceptions of the division of labour. These ideas are far from conclusive, and at times are speculative, but seem to suggest one possible avenue forward.

The thesis, to this point, has been general in nature. The focus has been on two points: (i) The emphasis in the existing literature on completing the reform cannot explain the relative success of China's economic reforms and (ii) The different concepts of the division of labour - the detailed division of labour and the social division of labour - provide a

basis for reconciling different themes on the firm - ie. market-hierarchies and collective learning. The remaining chapters develop these arguments in the context of the T.V.E sector in China. The next chapter presents some stylised facts about T.V.Es with particular focus on their institutional characteristics. The potential application of the collective learning theme to T.V.Es is considered in chapter five. This chapter also develops a regional based model of the "traditional" T.V.E. The trade-offs between the social division of labour and the detailed division of labour in some large coastal T.V.Es - in particular in Jiangsu - is explored in chapter six in the context of a formal mathematical model. There are some empirical tests of related theoretical propositions in chapter seven.

CHAPTER 4

INSTITUTIONAL CHARACTERISTICS OF T.V.ES

4.1 INTRODUCTION

T.V.Es and, in a more general sense, rural enterprises,¹ are central to China's high rate of economic growth. Rural Enterprises have grown at an exceptional rate since economic reforms were instigated. To illustrate, between 1985 and 1995, the number of rural enterprises increased at an average annual rate of around 17%. The average annual rate of growth in their real gross output value over the same period was 26% (calculations based on Statistical Yearbook of China various volumes). The increasing importance of T.V.Es is also reflected in official statements. For example T.V.Es were referred to in Deng Xiaoping's 1992 southern tour speech as one of the three advantages of socialism with Chinese characteristics. More recently Jiang Zemin, when inspecting agriculture and rural industries in 1996, also pointed out that "developing township enterprises is a revolutionary reform in rural construction and is of far-reaching significance".²

However, while the T.V.E sector has received plaudits, its success represents a seeming challenge to the standard property rights approach. The proprietorial interests in the T.V.E appear ill-defined and ill-specified when compared with standard property rights perspectives. This raises a number of issues for the post-socialist transition/post-socialist transformation debate. This also gives emphasis, *inter alia* to suggestions that there is an alternative to orthodox interpretations of post-socialist transition which dominate the debate on Eastern Europe. The aim of this chapter is two-fold. The first objective is to outline some institutional features of T.V.Es which differ from standard theories. The second objective is to provide a brief review of the manner in

which T.V.E institutions have been interpreted in the literature. The chapter hopes to show that T.V.Es do not fit well with the usual Anglo-American notions of what post-socialist transition should entail. Its other related aim is to at least raise the spectre that the institutional nature of T.V.Es provides the basis for further consideration of the general direction and thrust of the "wider" debate on post-socialist transition/post-socialist transformation. This second point is made in more of a speculative fashion, at this stage. Its theoretical basis is elaborated in more detail in the succeeding chapters.

The chapter is set out as follows: The next section gives a brief account of the historical evolution of T.V.Es and outlines some stylised facts about T.V.Es. Section 4.3 reviews the few existing theories which address their unique characteristics. The argument that the ambiguous nature of T.V.E property rights is an impediment to further reform is presented and an alternative perspective that there are some positive aspects in less than arms-length ties between T.V.Es and T.V.Gs is raised. Section 4.4 discusses T.V.E performance and considers some broader non-institutional issues including the problems facing T.V.Es. The main aim is to paint a broader picture of the role of T.V.Es. However, the points made in this section are at best suggestive. The reason is that the main theoretical treatment of T.V.Es in this thesis (which will be developed in chapters five and six), is essentially institutional-based and micro-oriented. A full evaluation of T.V.E performance and the wider issues facing T.V.Es necessitates consideration of broader development issues - in essence it requires a macro theory of China's economic development which lies outside the scope of this thesis.

4.2 SOME STYLISTED FACTS ABOUT T.V.Es

There is no single T.V.E model. Instead there are regional variants. Some common regional variants are: (i) the Guangdong model (in the Zhujiang delta - southern Guangdong), (ii) the Wenzhou model (in, southern Zhejiang)³

and (iii) the sunan model (originating in southern Jiangsu and the Yangzi delta). The Guangdong model has some collective firms which is similar to the sunan model but, given its location, there are more ventures with foreign capital, more direct trade with Hong Kong and more private firms. The Guangdong model is also characterised by large numbers of immigrant labour which undermines its communal character. It is considered in academic studies such as Vogel (1989) and Fitzgerald (1996). It has also been the focus of media attention.⁴ Huada, in southern Guangdong, is a recent example reported in the *Beijing Review*.⁵ The report, consistent with the main characteristics of the Guangdong model, stresses that "Huada's success is due to co-operative ventures between T.V.Es and Hong Kong companies". The Guangdong model differs from the second main variant - the Wenzhou model - where nearly all of the T.V.Es are private firms.

The sunan model differs from both. There is a strong sense of collective ownership and close ties between the T.V.E and T.V.G. At an intuitive level, the close relationship between T.V.Es and T.V.Gs characteristic of the sunan model is well-documented in media reports of T.V.E "success stories" such as Huaxi village in Wuxi,⁶ Wuxi in general⁷ and Zhangjiagang⁸ in Jiangsu. The rest of this chapter and the models in the following two chapters focus on the institutional arrangements characteristic of the sunan model. The rationale for doing this is three-fold. First, as noted in chapter one the thesis is concerned with investigating institutional issues in traditional township (*xiang*) and village (*cun*) level enterprises and the sunan model comes closest to the archetypal traditional T.V.E. Second, historically the sunan model has been the dominant ownership form. In most parts of China, but particularly in the more developed regions rural non-agricultural development has followed the sunan pattern. This provides a basis for exploring path dependencies affecting the historical evolution of T.V.Es. Third, previous theorising about

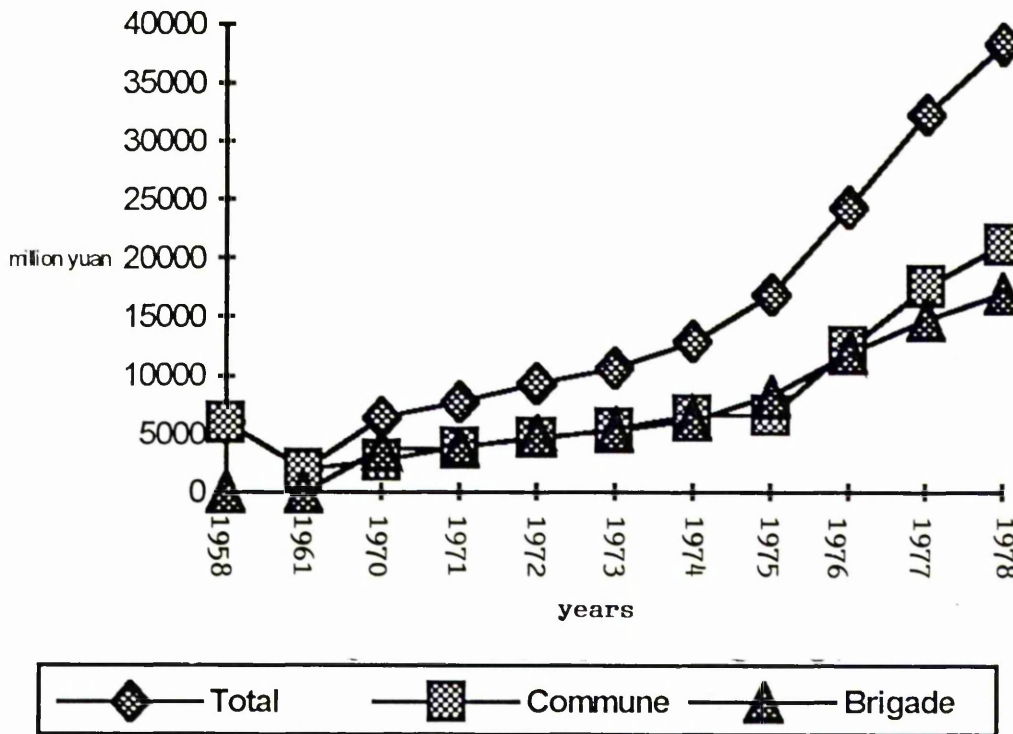
T.V.Es in Chang & Wang (1994), Weitzman & Xu (1994) *et al* have concentrated on the sunan model. The next two chapters take the existing literature as a starting point and attempt to both refine and extend its scope.

Historical Evolution

The sunan model has its origins in the Great Leap Forward. The predecessors to T.V.Es were commune and brigade enterprises (C.B.Es) which were first set up in 1958. C.B.Es were collectively-owned and controlled within the commune structure which consisted of the commune, brigade and production team. In southern Jiangsu they were mainly involved in the production of small farm machinery, chemical fertilisers, construction materials and simple processing of agricultural products. From the beginning the communal character of C.B.Es was emphasised in terms of ownership, control and surplus redistribution. The commune was responsible for the culture, work and education of the peasants (Riskin 1987 p. 124-125). This suggests that the evolution of T.V.Es is path dependent. Their communal properties can be traced to the communal character of the commune.

The economic and political fortunes of C.B.Es depended to a large extent on the ebbs and flows in government policies (Xu 1995 p.12). Data on the output value of C.B.Es for 1958-1978 are given in figure 4.1. The gross output value of C.B.Es in 1958 was six billion yuan. However, in the aftermath of the failure of the Great Leap Forward, most C.B.Es were closed down when the Central Committee and State Council jointly issued a document stating that communes and brigades should not establish enterprises.⁹ In 1961 the gross output value of C.B.Es fell to 1.96 billion yuan. It is well known that statistics on gross output value in the Great Leap Forward are not too reliable, so we have to be cautious making comparisons. But the magnitude of the difference (over four billion yuan) is suggestive.

FIGURE 4.1
Commune and Brigade Enterprises
Gross Output Value 1958-1978 (million yuan at constant prices)



Years	Annual rate of Growth (%)		
	Total	Commune	Brigade
1958-1970	0.54	-6.53	—
1958-1978	9.70	6.51	—
1970-1974	19.21	25.79	13.55
1974-1978	31.11	33.44	28.70
1970-1978	25.02	29.56	20.89

SOURCE: Islam (1991) table 1

By the mid-1960s, however, a number of C.B.Es were re-established with the help of urban workers who had returned to the countryside following the Great Leap Forward. Associated with this, the gross output value of C.B.Es

also started to increase. For example, in 1965 in Wuxi County alone the gross output value of C.B.Es was 5.6 million yuan (Whiting 1995 p.91). The Cultural Revolution was a period of significant growth for C.B.Es. Most commentators seem to accept that, although government statements applauding their growth did not appear until later, the seeds for C.B.E/T.V.E development were sown in this period. The North China Conference in 1970 is commonly considered to be a turning point. In 1970 the gross output value of C.B.Es was 6.4 billion yuan. At the (official) end of the Cultural Revolution in 1976, the gross output value of C.B.Es had increased to 24.4 billion yuan. The annual rate of growth in C.B.E output value for 1958-1970 was .54%, but for 1970-1978 the annual growth rate was just over 25% (see figure 4.1).

Southern Jiangsu was a natural place for C.B.Es to develop.¹⁰ The region has a strong agricultural and industrial base. Textile and food processing industries developed using raw materials provided by the agricultural sector. The periodic influx of "sent-down" workers, cadres, and urban youth throughout the Cultural Revolution provided technical skills, management experience and a network of connections. A concentration of major urban industrial sectors provided opportunities for C.B.Es to enter into contracts with state firms. These firms were also an important source of second hand equipment and other resources. In some counties such as Wuxi C.B.Es were especially encouraged. An important factor was that "in Wuxi the collective organisational structure of the commune and brigade were more prominent features of the lives of rural residents than elsewhere in China" (Whiting 1995 p.90). The prominence was the result of the scale of resources controlled at the commune and brigade level. The start-up capital for many C.B.Es came from revenue generated by collective agriculture and accumulated at the commune and brigade level. In turn C.B.Es generated significant revenue for the commune. By the mid-1970s communes in Wuxi derived about 40% of their income from C.B.Es (Perkins 1977 p.224). Much of this was reinvested

in C.B.Es. Perkins (1977 p.225) points out: "In the most developed places [communes] were using their new-found income not only to reinvest in more sophisticated industry, but also to stimulate new programs in the levels below the commune. This sort of development was particularly stressed in Wuxi".

There are different interpretations on the scope of, and reasons for, the growth in C.B.Es during the Cultural Revolution. One view is that power struggles in the central government meant that most of the control over local issues fell to local governments in this period (see eg Xu 1995 p.14). The local governments in some provinces, such as Jiangsu in particular, took advantage of this to set up enterprises. The local governments then protected these "underground enterprises", even though they were not officially encouraged, because they were important sources of revenue. This view places emphasis on the fact that in some quarters C.B.Es were regarded as "the tail of capitalism" (Islam 1991 p.690) and hence frowned upon. A different perspective is that the central government pursued deliberate policies of decentralisation and promotion of C.B.Es. Wong (1991) stresses this view. She argues that substantial state resources were given to local governments to finance rural industrialisation throughout the Cultural Revolution. Wong (1991 p.184) suggests: "[a]lthough some of the investment funding for rural industry was raised locally, outside the state sector, the share of total investment financed by state funds was surprisingly large".

Nevertheless, even if the centre did promote C.B.Es it is difficult to be sure about whether the support was active or passive. Ronnas (1993 p.228) argues "that the support of the central level for rural industrialisation was essentially of a passive nature. It consisted primarily of moral incentives and of the creation of an overall economic environment that was conducive to such development. Active support in the form, for example, of rural credits was of minor importance. Indeed such support on a large scale would have

run counter to the strategy of 'walking on two legs'". However, the statistics give some support to Wong's position that promotion was pro-active. The centre's budgetary expenditure increased throughout the Cultural Revolution. For example, between 1971 and 1975 the centre's expenditure was 212.5 billion yuan, compared with 153.8 billion yuan during the previous five years (Prime 1991 p.198). Of the centre's total expenditure Wong (1991 pp.186-187) estimates that in the period 1966-1978 as much as 35 billion yuan was made available for rural industrialisation in the form of designated sources alone.¹¹ When various sources of informal investment - eg. replacement and regeneration (*gengxin gaizao*) funds and the different forms of diverting enterprise profits - are taken into account¹² this figure becomes much larger.

In the 1980s, C.B.Es became a significant part of the local economy in southern Jiangsu. By 1990 officials in Jiangsu estimated that rural enterprises produced 90% of the province's industrial output.¹³ In addition rural enterprises in southern Jiangsu produced 90% of the area's gross product (Martellaro 1994 p.348). It was the most prominent C.B.E province and from the mid-1980s the ownership structure of C.B.Es/T.V.Es in Jiangsu was viewed as a model which was copied in other coastal provinces, the interior provinces and finally even some of the remoter parts of western China. Associated with this there have been several government statements affirming the role of C.B.Es/T.V.Es and encouraging their growth. The "Provincial Regulations on the Growth of C.B.Es", issued in 1978, permitted and encouraged the growth of C.B.Es, gave C.B.Es greater control over production and marketing, reduced or abolished taxation of C.B.Es and encouraged state-owned enterprises to assist and co-operate with C.B.Es.¹⁴

In 1983 the State Council issued guidelines which affirmed that "commune and brigade enterprises belong to the co-operative economy and great efforts must be made to continue to consolidate and develop such enterprises".¹⁵

When the commune structure was dismantled in 1984, C.B.Es were renamed T.V.Es. When the name was changed the State Council issued a circular stating: "Vigorous efforts should be made to guide T.V.Es in terms of orientation and development ... T.V.Es should receive the same treatment as state enterprises and are entitled to all necessary state aid".¹⁶ In 1984 the State Council's Document 4 formalised the political and legal status of T.V.Es which enabled them to obtain bank loans as legal persons. Following this in 1985 the State Science and Technology Commission launched the Spark Programme to promote the transfer of managerial and technological knowledge from the "modern sector" - the research institutes and large S.O.Es - to T.V.Es. Recent recognition of the broader importance of T.V.Es is reflected in a law (No. 76 Presidential Decree in the 22nd Session of the 8th NPC) outlining their role which came into effect in January 1997. The law states the task of T.V.Es is to "develop commodity production, offer social services, ... support agriculture [and] push ahead with rural modernisation"¹⁷.

Throughout, T.V.Es have had fairly easy access to bank credit. A common perception is that from late 1988 to middle 1990 rural enterprises became the main target of a government induced credit squeeze designed to curtail inflation (see Ho 1995, Wong *et al* 1995). In this period about two million rural enterprises ceased production. However, the statistics suggest that access to credit was not the real problem. The *zhili zhengdun* (readjustment and rectification) programme was launched in the fourth quarter of 1988 and put into effect in the second half of 1989. This resulted in a significant drop in the industrial growth rate due to a slump in domestic demand, in particular in the sale of consumer durables. The industrial growth rate (year-on-year) in the first half of 1989 was 10.8%, but it fell to 0.9% in September and -2.1% in October. The government responded by increasing bank credits. Thus, contrary to popular belief, total loans by State banks increased by 22.33% in

1989 and 48.39% in 1990. A substantial proportion of this was directed towards rural enterprises. In the first half of 1990 rural enterprises received 64 billion yuan in loans on top of 25% growth in 1989 (Lo 1997 pp.60-61).

With the exception of T.V.Es in Fujian and Guangdong who benefited from an "open door" policy earlier than T.V.Es in other provinces, for most of the 1980s T.V.Es served primarily local and domestic needs. However, when the coastal development strategy was adopted in 1988, T.V.Es in Jiangsu and other coastal regions were given incentives to promote exports and utilise foreign investment similar to those given earlier to T.V.Es in southern China. As a result many T.V.Es in the coastal regions became major exporters (Ho 1994, 1995). This reflected a more general trend where T.V.Es became more outward looking in the mid to late 1980s particularly in the more developed regions. World Bank research conducted in 1986-87 in four counties - Wuxi in Jiangsu, Jieshou in Anhui, Shangrao in Jiangxi and Nanhai in Guangdong - confirms this. For example, in Wuxi just 4% of T.V.E sales were within the home township and 82% of T.V.Es sold less than 20% of their output in their home county. In all four of the counties large majorities of firms sold at least 40% of their output outside their home province (Svenjer & Woo 1990).

There have been two main developments in the late 1980s and 1990s. The first is the growing trend towards converting T.V.Es to joint stock companies. Weitzman & Xu (1994) estimate, on the basis of personal interviews conducted in 1992 and 1993, that in Guangdong joint stock companies accounted for about 8% of T.V.Es. Joint stock companies in Zhejiang at the end of 1994 accounted for one-eighth of T.V.Es (Hong 1995 p.359). In May 1995, according to the Ministry of Agriculture, there were 204,000 shareholding T.V.Es which was 12.4% of total T.V.Es.¹⁸ These figures are quite low, although, the number of shareholding firms is increasing all the time and the proportion is likely to be much higher now. For example, one report suggests that, at the end of 1996, 66,300 or 70% of total T.V.Es in

Jiangsu had been transformed into joint stock forms, leasing arrangements or options.¹⁹ The other main issue has focused on regional differences in T.V.E development between the coastal and interior provinces. Policies designed to promote coastal development have resulted in significant regional disparities in the growth of T.V.Es. A central point of discussion in the 1990s has been the best approach to promote T.V.Es in the interior provinces. Both of these issues are considered in more detail in sections 4.3 and 4.4.

Ownership

Most scholars accept that the local residents are the nominal owners of the T.V.E (see eg Bowles & Dong 1994, Chang & Wang 1994). However, at the same time, most commentators emphasise that the T.V.E is not a private firm with well-defined property rights (see eg Nee 1992, Weitzman & Xu 1994). For example, Weitzman & Xu argue that T.V.Es are more akin to "vaguely defined co-operatives" whose ownership structure "appears to go almost completely against the grain of standard property rights theory" (Weitzman & Xu 1994 p.63). A commentator in the *China Daily* describes the ownership arrangement as follows: "In rural enterprises sponsored by local communities such as townships or villages, the property rights belong to the whole community but no individual in particular".²⁰ Luo writes "[we have] not yet found an appropriate paradigm for this peculiar system of property rights. It is heavily tinged with Chinese tradition and very different from the Western system under which the individual is the ultimate owner of property" (1990 p.140). The unusual nature of the T.V.E makes it hard to pinpoint the residual claimant. Weitzman & Xu (1994 p.75) even suggest: "There is no residual claimant in the traditional sense. The typical resident waits passively to receive or enjoy the benefits, of which the major part is not in monetary form but in the form of communal social investment which is shared by everyone".

Chang & Wang (1994 pp.439-441) dispute the claim that there is no residual claimant. They focus on the second part of the statement recognising that

the residual benefits are shared. They point out that about 40 percent of T.V.E profits are paid to the T.V.G in the form of fees. These fees benefit both the T.V.G and the township-village residents. The fees benefit the T.V.G because part of the fees are used to support its running costs. The rest of the fees support communal social welfare programs and infrastructure projects which benefit the township-village residents. The other 60 percent of profits are retained in the T.V.E to finance further development. The local residents seem to benefit most from T.V.E development because, *inter alia*, existing jobs are made more secure and more job opportunities are created. A third view which is a slight variation on Chang & Wang's (1994) argument is offered in Qian & Xu (1993) Their argument is that reforms along regional lines have given greater power to local government. "With these reforms local governments [*ie.* T.V.Gs] have become almost residual claimants [because] they have incentives to maximise local revenues" (Qian & Xu 1993 p. 25).

Control Rights

The control rights in the initial (and intermediate) period rest with the T.V.G. In this context Weitzman & Xu (1994 p.69) suggest that the T.V.G. is regarded as the representative of the residents and, as such, is best seen as the *de facto* executive owner of the T.V.E. Chang & Wang (1994) liken the part played by the T.V.G., in the initial stages, to a direct managerial role. "[The T.V.G] will choose or approve projects, raise or help raise funds, mobilise manpower and other resources within its jurisdiction to support the project and supervise the construction process" (1994 p.437). However, at an operational level the control rights, in most cases, shift to managers and workers in the T.V.E. Song (1990) describes this process through drawing an analogy between the T.V.G and the T.V.E and the father-son relationship. The T.V.G exercises more control in the T.V.E's early life, but as the T.V.E "grows up" it assumes more responsibilities. The T.V.G maintains managerial veto, but in the day-to-day running of the T.V.E it adopts a back seat role.

Over time, T.V.Gs become "profit oriented economic entities that might be compared with holding companies, investment corporations, or headquarters of loosely controlled multi-divisional corporations" (Byrd & Lin 1990 p.5). While casual empiricism suggests that in most T.V.Es, managers and skilled workers assume much of the control rights over time, the T.V.G. still retains ultimate control because throughout the T.V.E's life the T.V.G retains the power to appoint managers. Byrd & Lin (1990 pp 5-6) sum this up: "Although day-to-day management and business decisions are usually left to enterprise directors, community governments tend to be intimately involved in decisions on important investments, the establishment or dismantling of firms, significant changes in product lines [and] the appointment of enterprise management ... community governments can also absorb risk for subordinate community enterprises and can finance investments, both directly and through arranging other sources of funding such as bank loans".

The Market-Oriented and Redistributive Functions of T.V.Es

This passage suggests that managers in T.V.Es can be seen as representing local governments, while being given substantial independence in managerial decision making. Viewed in this light the managers of T.V.Es resemble executives in market economies, while T.V.Gs are similar to a board of directors (Gang 1993 p.57). However, the relationship between the board of directors and the company in a capitalist market economy is different from that between T.V.Gs and T.V.Es in some important respects. One of the differences is that T.V.Gs play a role in income distribution and, on the whole, the control which the T.V.G exercises over the T.V.E is associated with the T.V.G's redistributive role. To this end the T.V.E serves as a vehicle for the social welfare policies of the T.V.G. This takes at least three forms. First, the T.V.E is a source of revenue for the T.V.G through taxation and profit remittances. Second, the T.V.E is a source of employment for the nominal

owners - the local residents. Third, T.V.Gs at times, make short-term transfers between T.V.Es (often routed through township industrial corporations) to ease structural difficulties in times of economic stagnation.

TABLE 4.1
Severity of Losses Among T.V.Es in Lin *et al*'s (1992) Sample
(% of total number of loss-making firms in the sample)

Unable to pay tax in conformity with regulations	0
Unable to pay principal and interest on bank loans	33
Unable to pay wages to workers	59
Unable to pay various fees levied by the government	62
Unable to pay various service charges levied by the County Industrial Bureaus	68
Unable to pay bonuses to workers	74
Unable to remit profits in accordance with regulations	100

NOTES: 10.3% of the sample were loss-making firms

SOURCE: Lin *et al* (1992) p.264

The managerial operations of the T.V.E are market-oriented. By 1986 70% of the main material inputs of rural enterprises were purchased through the market, and over two-thirds of their output was sold at market determined prices (Singh 1993 p.27). While T.V.Gs make transfers between T.V.Es, local budget constraints are relatively hard. Lin *et al* (1992) sampled 400 T.V.Es in Yuanping County, Shanxi in 1984-85. Table 4.1 shows the degree of severity of losses experienced by the loss-making enterprises in that sample. The results of the sampling exercise provide a good indication of the relative strength of various kinds of external constraints on the budgets and finances of T.V.Es. For example, no loss-making enterprise reported that they had not paid indirect taxes in accordance with regulations suggesting that the taxation constraint is relatively hard. On the other hand, all of the

loss-making enterprises cut down their profit remittance to government which suggests that this constraint is relatively soft. Overall, the order of severity of different external constraints affecting various expenditure items for T.V.Es in the Lin *et al* (1992) sample (from most severe to least severe) were (i) state taxes, (ii) bank loans, (iii) wages, (iv) fees and service charges, (v) employee bonuses and (vi) profit remittance to local government (see table 4.1).

In T.V.Es which have adopted the "manager contract system" managers have well specified compensation schedules which stress market criteria. The contract is normally an agreement specifying the manager's independence and his/her obligations to turn over profits to the T.V.G. While there have been various criticisms of the contract system (see Schadler 1990 p.232), there is widespread agreement that in T.V.Es run under contract, managers are less subject to local government interference and are in a better position to defend the T.V.E's interests (see *eg* Byrd & Gelb 1990 pp.379-380). Schadler (1990 p.231) estimates that in 1985 90% of collective enterprises had become contract enterprises. Gang (1993) sampled 630 rural enterprises (268 collective and 368 non-collective) in Sichuan and Zhejiang in 1991. He reports (at p.56) that 42% of the total sample and 86% of the collective enterprises were contracted out to either managers or management staffs.

Gang (1993) also presents evidence which suggest that there is a fairly clear distinction between the market and redistributive functions of T.V.Es. His results on the determinants of branch choice in the sample are reproduced as table 4.2. It shows that for the sample as a whole the support of local government was not as important as economic determinants such as the availability of skilled workers and the professional expertise of managers. Table 4.2 supports two general observations made above. The first is that rural enterprises are fairly market-oriented - for example they give strong considerations to product marketability when deciding whether to enter into a

TABLE 4.2
Rural Enterprises
Major Determinants of Branch Choice (%) in Gang's (1993) Sample

		<u>Local Government Support</u>							
		1st Determinant		2nd Determinant		3rd Determinant			
Whole sample		5.1		9.2		9.5			
Collective		9.9		16.4		12.2			
Non-Collective		1.6		4.1		7.6			
		<u>Availability of Bank Loans</u>							
Whole sample		2.2		10.0		8.4			
Collective		4.6		15.6		12.2			
Non-Collective		0.5		6.0		5.7			
		<u>"Other" Determinants of Branch Choice</u>							
		Primary Determinants							
	A	B	C	D	E	F	G	H	I
Whole sample	30.6	31.3	1.6	8.7	13.8	1.4	4.6	92	0.2
Collective	23.3	26.0	1.9	11.8	18.3	1.5	2.7	85.5	0.0
Non-Collective	35.9	35.1	1.4	6.5	10.6	1.4	5.9	96.8	0.3
		Secondary Determinants							
	A	B	C	D	E	F	G	H	I
Whole sample	13.5	23.3	1.6	9.7	15.6	3.0	3.7	70.4	10.5
Collective	11.8	20.2	3.1	7.6	13.4	3.1	2.7	61.9	6.1
Non-Collective	14.7	25.5	0.5	11.1	17.1	3.0	4.4	76.3	13.6
		Tertiary Determinants							
	A	B	C	D	E	F	G	H	I
Whole sample	9.7	5.6	1.4	5.2	17.5	4.6	8.0	52.0	30.0
Collective	15.6	5.7	1.1	8.0	19.5	3.4	4.6	57.9	17.6
Non-collective	5.4	5.4	1.6	3.3	16.0	5.4	10.4	47.5	38.9

NOTES:

(i) The number of total observations was 630 (Collective = 262 and Non-collective = 368). (ii) Codes: A = Availability of skilled workers, B = Professional experience of the manager, C = Funds, technologies and personal training provided by state enterprises, D = Locally available natural resources, E = Good marketability of products, F = Traditional local branches, G = Income increase, H = Accumulated percentages A-G, I = Not applicable.

SOURCE:

Gang (1993) Tables 2 and 2a.

particular kind of business. Second, rural enterprises enjoy considerable autonomy in business decision making, although the decision to establish the enterprise in the first place is usually made by the T.V.G. However, table 4.2 suggests that local governments have more influence on business decisions in collective rural enterprises relative to non-collective rural enterprises. This is indicated by the fact that local government support and the availability of bank loans is more important to collective than non-collective enterprises.

These basic points have been recognised by other commentators - for example Ho (1994) in his study of T.V.Es in Jiangsu, Wong *et al* (1995) in their ten case studies of T.V.Es in Jiangsu and Shandong and Naughton (1994). Naughton (1994 p.268) writes: "It is clear that the successful township official (i.e. manager) maximises his own career prospects by maximising economic growth during his term as community leader and this depends crucially on maximising net revenue from T.V.Es". At times there have been some misgivings expressed about the potential for conflict between the managerial operations of the T.V.E and the redistributive objectives of the T.V.G. However, whether the potential for conflict is realised depends on how well the T.V.E manages the redistributive constraint on its profit maximisation function. A further consideration is that most T.V.Es see profit maximisation as a subset of a broader communal welfare function where the objective is to maximise the welfare of the nominal owners - the township-village residents.²¹

4.3 INTERPRETATIONS ON T.V.E INSTITUTIONS

A lot of reservations have been expressed about the ambiguous nature of T.V.E property rights. For example, an article in *Nongmin Ribao* (Farmers' Daily) which is attributed to the Ministry of Agriculture, states: "Ownership is shared by everybody, while no-one is responsible for the enterprise; responsibilities for property rights are unclear, and so are the respective responsibilities for administrative duties and enterprise management.

[Moreover] rural administrative leaders frequently interfere arbitrarily with enterprises".²² The same sentiment has been expressed in many academic articles. Hong (1995) is illustrative when he suggests (at p.360) "under collective ownership everybody owns the property [which] actually means nobody owns [it] and nobody cares as well". These concerns have led some academics to argue that T.V.Es should be converted to joint stock companies (eg Young 1994, Hong 1995), or for other solutions such as "markets which trade in property rights".²³ As alluded to above the notion that T.V.Es should be converted to shareholding enterprises also has strong support in official circles.²⁴ The T.V.E Bureau has even issued a non binding directive giving advice on how to conduct shareholding co-operative reform in T.V.Es.²⁵

However, coming from a different angle, concerns about the "ambiguous" nature of the relationship between T.V.Es and T.V.Gs might be overstated. The problem is that the emphasis on "completing" the reform (via the introduction of joint stock companies) overlooks two important points. The first is the success which T.V.Es have had and, to a significant extent, continue to have with ill-defined property rights. The second is the theoretical issue of how to design a workable mechanism which is faithful to the basic tenets of individualistic property rights. Articles like that in *Nongmin Ribao*, which is referred to in the last paragraph, blame conflicting responsibilities and managerial interference on informal ties between T.V.Es and T.V.Gs. The fact that property rights are unclear can, at times, present problems. Nobody disputes this. However, what is often overlooked is that the reasons for the success T.V.Es have had might be found in the same informal ties. The close informal relationship between T.V.Es and T.V.Gs might even be a strength rather than a weakness. This is particularly so given market imperfections which can be particularly severe in (post) socialist economies.

The nature of the relationship between T.V.Es and T.V.Gs needs further

research, but there are a few papers which offer explanations for the economic success of T.V.Es in the light of ill-defined social ownership. Weitzman and Xu (1994) theorise that the T.V.E. can be studied in terms of the folk theorem of repeated games. Their argument is that societies differ in their degree of co-operative culture (denoted as λ). Where co-operative culture is weak, standard property rights stories are applicable. However, where co-operative culture is strong (which Weitzman & Xu suggest is the case in East Asia) implicit contracts might be preferable to arms-length transactions. This argument has two pluses. Weitzman & Xu, first, offer an explanation for the existence (and success) of informal contracting, rather than focusing on transition to a textbook ideal. The co-operative culture argument, second, paints implicit contracting between T.V.Es as a rational design response given path dependent considerations. This sees implicit contracting as an "end" (in the context of a specific evolving process rather than in an absolute sense) and not an impediment to completing the reform.

The notion that informal ties between T.V.Es and T.V.Gs represent a rational design response is also put forward in Chang and Wang (1994). Their model suggests that the T.V.E is designed to maximise the welfare of local citizens. In this respect, their reasoning is based on the theoretical model presented in Grossman & Hart (1986). The focus of the paper is on explaining the reasons for (i) giving the T.V.G the control rights (at least in the initial and intermediate stages) and (ii) making the township-village residents the nominal owners. The T.V.G, according to Chang & Wang, is given the control rights because its "inputs" (meaning, in effect, its guiding influence) are most critical to the success of the T.V.E. The nominal ownership is vested in the local residents as a commitment that most of the benefits will remain in local hands. The allocation of ownership/control rights from this perspective, given the political climate, is a strength rather than a weakness.

Pei (1996) puts forward a different explanation to Chang & Wang and Weitzman & Xu. He argues that the township-village is a coalition of "inter-specific" resources which are owned in common. These consist of "kinship ties, ... trust and the co-operative spirit of the village group" (p.60). There are also other inter-specific resources which are particular to a township-village "such as the special knowledge obtained from long-term learning-by-doing and special local products" (pp.60-61). Pei argues that these resources generate net benefits which the township-village, as a whole, appropriates as economic rents. T.V.Es have been successful because net benefits of collective action have increased with fiscal decentralisation. "The major factor explaining the presence or absence of co-operation in the village is the net collective benefit of that action. Before reform, this benefit was seized by the state and co-operation was absent" (p.61). However, since the reforms, the notion of "eating in separate kitchens" means that economic rents from collective action are retained at the regional level. Pei's approach is consistent with, and builds on, Alchian's (1984 p.39) definition of the firm as a coalition of inter-specific resources owned in common. Pei uses this definition to argue that the inter-specific resources of the township-village are institutionalised as specific contractual relations. The township-village (T.V.G and residents) behaves as a firm and the collective benefits are internalised.

In spite of the benefits stressed in *inter alia* Chang & Wang (1994) and Weitzman & Xu (1994) informal ties between T.V.Es and T.V.Gs present some problems. For example, the dual functions that the T.V.E and T.V.G perform (redistribution and profit maximisation) can present difficulties at times. The issue of where the T.V.E ends and where the T.V.G begins and whether the T.V.G is part of, or separate from, the T.V.E is also problematic. Consistent with the dominant view in the transition literature more joint stock companies might be needed to deal with the problems which these issues raise, but a common approach is for the literature to focus exclusively on the

costs of ambiguous property rights. The desirability of "completing" the reform, however, needs to be seen as part of a broader picture. This requires consideration of the potential benefits and not just the costs of informal ties.

4.4 PERFORMANCE AND SOME WIDER ISSUES

Employment, Numbers and Production

Table 4.3 shows the number of rural enterprises, their employment structure and gross output by sector for select years between 1978 and 1995.²⁶ Table 4.4 shows the output of rural enterprises in select industries for 1990 to 1994. In terms of employment and gross output rural enterprises are mainly engaged in industrial production. For example in 1995, industry accounted for almost 75% of gross output and nearly 59% of people working in rural enterprises. The actual number of rural enterprises in the industrial sector was 32.6%. Rural enterprises are engaged in some heavy industries such as coal and electricity, although in electricity they produce only a small proportion of total output. Most rural enterprises are engaged in light industries such as building materials, clothing, farm tools, fertilisers, leather products, machine building, paper products and textiles (see table 4.4).

The second main sector is commerce and food services. In terms of enterprise numbers it is the largest sector. Commerce and food services has increased from 8% of total rural enterprises in 1978 to 38.8% in 1995. In 1995 commerce and food services also accounted for 16.3% of the rural enterprise labour force, but its gross output was only 9.3% of the total. The third sector is construction. In 1995 only 4.8% of rural enterprises were in construction with 15.1% of the labour force. It produced just over 9% of rural enterprise output. Apart from the growing importance of commerce and

food services, the main trend in table 4.3 is the declining importance of agriculture. In 1978 32.5% of rural enterprises and 21.5% of the rural enterprise labour force were in agriculture. Relative to industry the gross output value in 1978 was low, but it was still 7.3% of the total. However, in 1995, only 1.3% of rural enterprises and 2.4% of people working in rural enterprises were in agriculture. It produced 1.5% of rural enterprise output.

TABLE 4.3
Rural Enterprises
Composition of Enterprises, Employment and Output by Sector
1978-1995

<u>Number of Enterprises</u>	1978	1984	1990	1994	1995
(million)	1,524	6,065	18,504	24,945	22,027
<u>By Sector (%)</u>					
Agriculture	32.5	4.1	1.2	1.0	1.3
Industry	52.1	79.3	39.0	28.0	32.6
Construction	3.1	1.3	4.9	3.3	4.8
Transportation	4.3	2.1	20.6	14.8	22.5
Commerce & Food Service	8.0	13.1	34.3	52.9	38.8
<u>Total Employment</u>	28.3	52.1	92.7	120.2	128.6
(million)					
<u>By Sector (%)</u>					
Agriculture	21.5	5.5	2.5	2.2	2.4
Industry	61.4	70.2	60.1	57.9	58.8
Construction	8.4	13.1	14.5	13.5	15.1
Transportation	3.7	2.5	7.7	6.0	7.4
Commerce & Food Service	5.1	8.7	15.1	20.4	16.3
<u>Gross Output</u>	49.3	171.0	846.2	4258.9	6891.5
(Billion yuan at current prices)					
<u>By Sector (%)</u>					
Agriculture	7.3	3.1	1.7	1.4	1.5
Industry	77.3	72.8	71.5	75.9	74.4
Construction	8.6	12.7	11.3	9.6	9.2
Transportation	4.2	2.8	7.7	5.1	5.6
Commerce & Food Service	2.8	8.6	7.9	8.0	9.3

NOTES: Statistics on rural enterprises were only published from 1984 when below village categories were added. The 1978 figures are for T.V.Es.

SOURCE: Calculated from statistics in *Statistical Yearbook of China* 1995, 1996

TABLE 4.4
Rural Enterprises
Output in Select Industries
1990-1994

<u>product</u>	1990	1991	1992	1993	1994
coal (10,000 tons)	35,773 [33]	33,793 [31]	42,357 [38]	51,343 [45]	30,017 [24]
electricity(100,000 kWh)	135,099 [02]	135,196 [02]	163,770 [02]	189,550 [02]	208,400 [02]
chem. fertilisers (10 tons)	N.A	164,654 [8.3]	207,388 [10]	317,139 [16]	512,546 [23]
farm tools (10,000)	N.A	59,819	92,326	183,608	N.A
bricks (1000,000)	417,371	421,040	495,485	640,841	698,206
cement prefabricated. components (10,000 m ³)	60,511	55,047	9,055	22,733	N.A
granite (10,000 m ³)	22,217	29,409	4,957	6,141	N.A
marble (10,000 m ³)	1,809	1,371	948	2,610	N.A
clothing (10,000)	251,234	393,787	326,092	580,820	835,866
leather products (10,000)	65,131	63,700	73,974	134,581	112,381
silk textiles (10,000 m)	79,834	76,799	104,807	160,939	N.A
cloth (10,000 m)	404,462 [21]	359,928 [20]	391,048 [21]	515,151 [25]	584,624 [28]
woollen fabrics (10,000 m)	8,047 [27]	N.A	12,344 [37]	N.A	N.A
paper products (10 tons)	N.A	602,947 [41]	787,182 [46]	1,132,341 [59]	546,720[49]

NOTES:

(i) N.A = not available, (ii) Where national figures are available, rural enterprise output as a percentage of the national total is given in parenthesis. (iii) Percentages are rounded to the nearest whole number. (iv) The percentages are estimates. The figures for rural enterprises are from *China Agriculture Yearbook* and are collected by the Bureau of Township and Village Enterprises. The national totals used to calculate the percentages are from the *Statistical Yearbook of China* which is compiled by the State Statistical Bureau. Caution is needed given possible discrepancies in collection methods.

Rural enterprise gross output value as a proportion of society's gross output value in agriculture, industry and construction for 1980, 1985 and 1990-1995 is given in table 4.5.²⁷ In each of the years rural enterprises have accounted for 5% or less of agricultural gross output value suggesting that they are of marginal importance in that sector. However, in construction and industry the situation is different. In construction, rural enterprise share increased from 17.3% in 1980 to 31.5% in 1985 and 66.7% in 1995. The rate of growth in

TABLE 4.5
Rural Enterprise Gross Output Value as a Proportion of Total Gross Output Value for Society in Agriculture, Construction and Industry

Year	Agriculture			Construction			Industry		
	a	b	c	a	b	c	a	b	c
1980	39.4	1923	2.0	60	347	17.3	509	5154	9.9
1985	58.7	3619	1.6	310	985	31.5	1827	9716	18.8
1990	141.8	7662	1.8	952	1948	48.9	6050	23924	25.3
1991	179.5	8157	2.2	1141	2285	49.9	8709	28240	30.8
1992	246.8	9085	2.7	1744	3299	52.9	13635	37066	36.8
1993	401.9	10996	3.7	3227	5499	58.7	23447	52692	44.5
1994	575.6	15750	3.7	4076	7684	53.0	32336	70176	46.1
1995	1018	20341	5.0	6336	9505	66.7	51529	91893	56.1

SOURCE: *Statistical Yearbook of China* (various years)

NOTES: (i) (a) rural enterprise gross output value in 100,000,000 yuan, (b) total gross output value in the relevant sector in 100,000,000 yuan, and (c) = (a/b)×100 expressed as a percentage. (ii) Comparable statistics for transportation and commerce & food services were not available. (iii) The value for 1980 is given for T.V.Es - see notes to table 4.3.

the proportion of industrial gross output produced by rural enterprises is similar. Rural enterprises were responsible for 9.9% of gross output value in 1980, but in 1985 this figure had grown to 18.8% and in 1995 it was 56.1%.

While there is considerable overlap between the type of products which rural enterprises and S.O.Es produce, there are some important differences. First, rural enterprises often specialise in labour intensive production such as building materials, textiles and other light manufacturing. Second, irrespective of the goods or services that they produce, rural enterprises tend to make more use of labour intensive methods. For example, Jefferson *et al* (1992) provide deflated capital stock estimates (at 1980 constant prices) for industrial S.O.Es and for urban and township collectives (township and above industrial enterprises with independent accounting mechanisms) for the

period 1980 to 1988. They found that the gap in fixed assets per worker had narrowed from 5.7:1 in 1980, but it was still 4:1 in 1988. At historical values, fixed assets per worker in industrial S.O.Es in 1988 were approximately 20,800 yuan, compared to 3,240 yuan in T.V.Es (including a small amount for service establishments). Allowing for working capital, total capital per worker was 26,860 yuan in S.O.Es and 6,385 yuan in T.V.Es (Ody 1992 p.11).

Performance

Both T.V.Es and the broader category rural enterprises, have grown at a phenomenal rate. The growth performance of both is outstanding when compared with the rest of the (developing and developed) world. Table 4.6 gives some statistics on rural enterprises which illustrate their growing importance. The statistics on rural enterprises are from 1985 (below village categories were added to T.V.Es in 1984). Between 1985 and 1995 the number of rural enterprises grew at an average rate of 17.1%. The number of people working in rural enterprises has grown at an annual rate of 8.4%. The original value of fixed assets in rural enterprises has grown at an annual rate of 27.6%, while the growth in annual real gross output value between 1984 and 1995, consistent with the figures in tables 4.3 and 4.5, was 25.8%.

TABLE 4.6
Selected Statistics for Rural Enterprises 1985-1995
Average Annual Growth Rates

CATEGORY	1985-1986	1986-1990	1990-1995	1985-1995
Number of Enterprises	62.65	9.07	4.94	17.10
Number of Workers	17.14	6.02	6.65	8.36
Original Value of Fixed Assets	28.33	24.15	30.15	27.63
Real Gross Output Value	17.10	13.21	34.51	25.80

SOURCES: *Statistical Yearbook of China* (various years).

NOTES: (i) N.A = not available, (ii) statistics on rural enterprises were only published from 1984. Before this published statistics were for T.V.Es. Figures are not given for 1984 to avoid artificially inflating growth. (iii) G.O.Vs were deflated using industrial G.O.V implicit price deflators.

TABLE 4.7
Township Enterprises and Village Enterprises
(Number of Enterprises, Gross Output Value and Number of Workers 1978-1995)

YEAR	Number of Enterprises (1000's)		Real Gross Output Value (billion. yuan) at 1978 constant prices		Number of Workers (million)	
	Township	Village	Township	Village	Township	Village
1978	320	1205	28.1	21.2	12.6	15.7
1979	321	1160	28.3	22.2	13.1	15.9
1980	337	1082	28.9	22.5	13.9	16.1
1981	335	1002	31.4	23.2	14.2	15.5
1982	338	1024	33.7	24.7	15.0	16.2
1983	338	1008	36.6	26.4	16.7	16.7
1984	402	1462	41.6	33.0	18.8	21.0
1985	420	1430	49.7	39.7	21.1	22.2
1986	426	1302	57.2	44.6	22.7	22.7
1987	420	1163	67.5	52.4	24.0	23.2
1988	424	1167	81.7	64.5	24.9	24.0
1989	406	1130	86.5	70.6	23.8	23.4
1990	388	1066	93.9	76.8	23.3	22.6
1991	382	1060	127.1	102.4	24.3	23.4
1992	393	1127	179.9	147.4	26.1	25.4
1993	434	1251	266.6	236.5	28.8	28.9
1994	423	1228	350.1	321.8	29.6	29.4
1995	417	1201	481.2	456.6	30.3	30.3
1978-1995 average annual growth rate	1.8%	1.9%	19.0%	20.9%	5.3%	4.4%

NOTES: G.O.Vs were deflated using industrial G.O.V implicit price deflators.

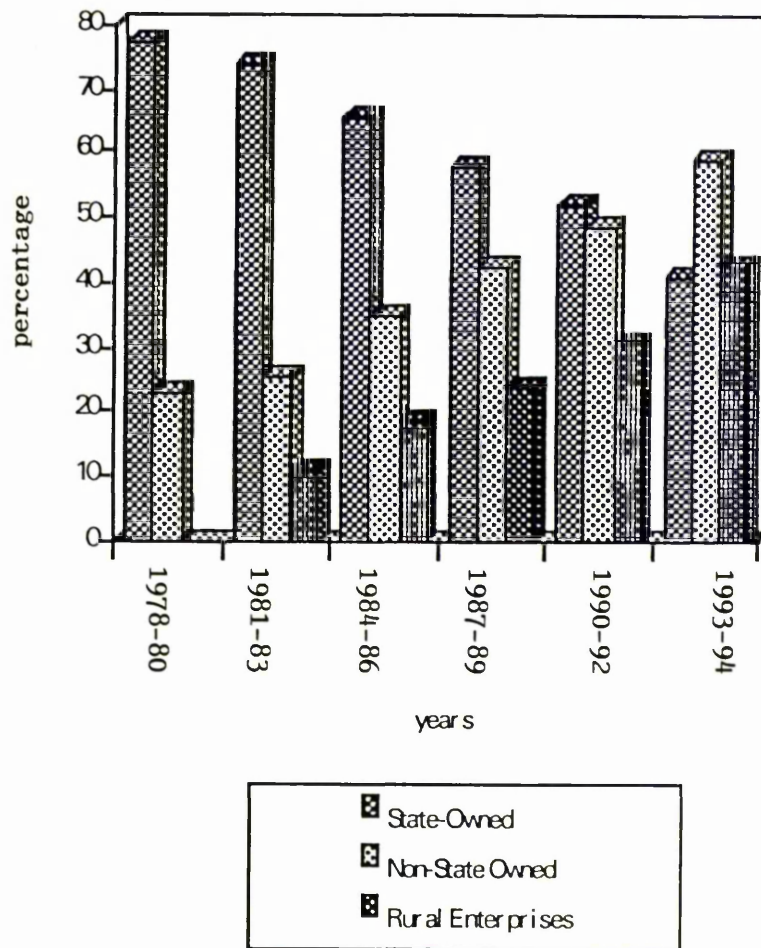
SOURCE: *Statistical Yearbook of China* 1991, 1994, 1995, 1996

Table 4.7 presents some comparable statistics on T.V.Es for the period 1978-1995. The number of T.V.Es, relative to rural enterprises as a whole, has been static with annual growth 1.8-1.9%. The number of people working in T.V.Es has increased at an annual rate of around 5%. The real gross output value of township enterprises has increased at 19% and the real gross output value of village enterprises has increased at 20.9%. When compared with the statistics in table 4.6, this suggest that the rate of growth in the various below village categories such as co-operatives, partnerships, private

and individual firms - the private sector - has been greater than in T.V.Es. There are also far more firms in the private sector than there are T.V.Es. The private sector made up 93% of rural enterprises in 1995 (Statistical Yearbook of China 1996 p.387). However, these figures tend to give a misleading picture, when weighing up the relative importance of the private sector and T.V.Es, for a couple of reasons. First in 1995, in spite of their small numbers in relative terms, T.V.Es still accounted for 47.1% of total workers in rural enterprises and produced 61% of their gross output value (Statistical Yearbook of China 1996 p.389). Second, it has to be remembered that the below village categories were starting from a smaller base in terms of output.

The growth in real gross output value shown in tables 4.6 and 4.7 is reflected in figure 4.2 which shows the average annual share of gross industrial output value by ownership since the reforms were initiated in 1978. Figure 4.2 compares the share of industrial gross output for rural enterprises from table 4.5 with that of S.O.Es. Two trends are discernible. The first is the decline in the industrial output value in the state sector relative to the non-state sector. The second is the increasing importance of rural enterprise share in the non-state sector. The average annual share of gross industrial output value for rural enterprises between 1981 and 1983 was 11.19%. However, in 1993-94 this figure was four times as great (43.25%). Table 4.8 compares the financial performance of collectively-owned enterprises (C.O.Es) and S.O.Es for the period 1985 to 1994. The obvious point from the table is that C.O.Es and S.O.Es display similar trends. Over the period both exhibit falling profit rates, an increase in the proportion of loss-making enterprises, and an increase in the loss-to-profit ratio. On the whole S.O.Es performed better than C.O.Es in the boom period of 1985-1988. However, in the recession and subsequent rebound period (ie. since 1989) each of the financial indicators suggest that C.O.Es have performed better than S.O.Es.

FIGURE 4.2
China: Average Annual Share of Gross Industrial Output Value by Ownership
 (values are annual percentages averaged over the period)



SOURCE: *Statistical Yearbook of China* (various years)

NOTES: The 1978-1980 value for rural enterprises was not available. The rural enterprise value for 1981-1983 is for T.V.Es - see notes to table 4.3.

TABLE 4.8
Comparative Financial Indicators for
Collectively-Owned Enterprises and State-Owned Enterprises

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<u>collectively-owned enterprises</u>										
profit rate	24.6	19.4	18.2	19.8	15.4	11.5	11.9	10.1	10.9	10.7
loss-to-profit ratio	—	5.3	6.4	4.8	10.5	22.4	17.2	10.7	—	—
proportion of loss making enterprises	11.7	13.2	14.7	11.7	15.7	19.4	16.7	13.7	16.5	—
<u>state-owned enterprises</u>										
profit rate	23.5	20.7	20.3	20.6	17.2	12.4	11.8	9.7	9.7	9.8
loss-to-profit ratio	—	5.3	6.4	4.8	10.5	22.4	17.2	10.7	—	—
proportion of loss-making enterprises	9.6	13.1	13.0	10.9	16.0	27.6	25.8	23.4	28.8	—

SOURCE:

Lo (1997) table 4.1.

NOTES:

(i) Profit rate = (profits + taxes) ÷ (value of fixed assets net of depreciation + working capital). (ii) Profit-to-loss ratio = total losses of loss making enterprises ÷ (profits + taxes). (iii) Proportion of loss-making enterprises = number of loss making enterprises ÷ total number of enterprises. (iv) All figures are expressed as percentages. (iv) The figures are for township and above industrial enterprises with independent accounting systems.

Most commentators accept that, on the basis of limited studies comparing relative productivities, T.V.Es appear to be more efficient than S.O.Es. For example Weitzman & Xu (1994) calculate total factor productivities (T.F.P) for S.O.Es and T.V.Es for 1979-1991. The average annual T.F.P for T.V.Es, over this period (12%) was three times the estimate for S.O.Es (4%). Woo *et al* (1994) point to a number of possible problems with T.F.P as a measure of efficiency. But, even allowing for methodological reservations, the magnitude of the differences in T.F.Ps in Weitzman & Xu (1994) suggest that T.V.Es are, relative to S.O.Es, efficient. Jefferson *et al* (1992) compare the performance of the state industrial sector with collectives at township level and above (ie. including township and urban collectives, but excluding village firms) for the period 1980-1988. They found that the average productivity of labour in the

collective sector had increased by over 12% per annum over the period where the comparable figure for the state sector was 5.2%. They also found that the average productivity of capital in the collective sector grew at an average annual rate of 4.5% which was more than twice the figure for S.O.Es (2.1%). Reservations exist about these results because of possible upward bias in real output measures, but again even allowing for possible measurement errors the magnitude of the differences are at least suggestive.

The results of studies like these, using aggregate data, are supported by studies using firm-level data. Murakami *et al* (1996) compared T.F.P in a sample of 48 S.O.Es and T.V.Es of different sizes involved in the machine tool industry in Shenyang, Shanghai and Wuhan. While the sample was small, their results suggested that T.V.Es were more efficient than S.O.Es regardless of the latter's size. T.F.P in T.V.Es was found to be 42% higher than in large S.O.Es, 40% higher than in medium sized S.O.Es and 21% higher than in small S.O.Es. In another study employing a larger sample, Fung & Wan (1996) compare economic efficiency in the state and collective sectors using panel data on 7273 enterprises in Hubei in 1990. Their main conclusion (at p.482) is that "the state sector performed worse than the collective sector with a lower median efficiency index in almost all industries".

T.V.Es also seem to be as efficient as private firms which have well-defined property rights. For example, Svejnar (1990) runs a series of regressions using pooled panel data from 400 T.V.Es and private firms in four Jiangsu counties over a 16 year period. He used ownership dummies to distinguish between T.V.Es and private firms. The co-efficients on the ownership dummies were statistically insignificant, suggesting that "private ownership and community ownership appear to have similar effects of productivity" Svejnar (1990 p.253). Pitt & Putterman (1996) reached similar conclusions in a more recent exercise. Pitt & Putterman pooled data on 200 T.V.Es and

private firms distributed over 10 provinces from 1984 to 1989. These studies provide some evidence to suggest that T.V.Es are as efficient as private firms. But, even if it is going too far to draw detailed conclusions on the basis of a few studies, it is clear that ownership did not matter in these samples.

However, a few words of caution are needed. It is difficult (if not impossible) to draw conclusions about comparative performance without detailed consideration of broader development issues at a macro level. This thesis, in the next few chapters looking at T.V.Es, will largely abstract from wider development issues. Instead, the focus will be on the institutional characteristics of T.V.Es so that comments about comparative performance are just suggestive. To illustrate, the growth in gross output value of T.V.Es has been high and is expected to continue. A Working Conference on National Township Enterprises held in September 1993 set a target gross output value for rural enterprises for the year 2000 of 7,600 billion yuan. This would represent a five-fold increase over the gross output value in 1992. The industrial gross output value is also expected to grow to 5,400 billion yuan. The figure, in 1992, was 1250 billion yuan.²⁸ At one (superficial) level this figure gives support to suggestions in, *inter alia*, Mei (1993) that T.V.Es have been important vehicles for absorbing large numbers of surplus rural labourers. It is pretty clear that they have, but whether this is positive or not depends on the inter-sectoral effects this has had on agriculture and these sort of comparative development issues lie outside the scope of this thesis.

Regional Differences in Development

The contribution of T.V.Es varies across regions. This, in part, reflects the fact mentioned above that some provinces, such as Jiangsu, took advantage of decentralisation, whether it was *de facto* or deliberate, to get a "head start" in setting up T.V.Es. However, the existence of regional differences in the level of T.V.E development also mirrors regional disparities in general

economic indicators (Yang & Wei 1996, Yao 1996). The provinces can be classified into three different zones.²⁹ The eastern zone contains the coastal and suburban provinces. These have the highest G.D.P per capita and their enterprises produce the largest share of rural enterprise gross output. The central and western zone contains the lesser developed interior provinces. The western zone has the lowest G.D.P per capita and share of rural enterprise gross output. The central zone is in between in terms of G.D.P per capita and rural enterprise gross output value. Table 4.9 gives regional differences in G.D.P per capita for the period 1988 to 1995. Over the period the "gap index" shows that G.D.P per capita in the eastern zone has been about 50% higher than that in the central and western regions combined.

TABLE 4.9
Regional Differences in G.D.P per Capita 1988-1995
(Yuan, %)

	1988	1989	1990	1991	1992	1993	1994	1995
(a) Eastern	1787	1991	2077	2392	2984	4077	5443	6768
(b) Central & Western	985	1083	1178	1286	1510	1934	2674	3453
(c) Gap Index	44.9	45.6	43.3	46.2	49.4	52.6	50.9	47.7

SOURCES:

Yang & Wei (1996), *Statistical Yearbook of China* 1995,1996

NOTES:

(i) $(c) = 100 \times (a-b)/a$ (ii) The eastern zone covers Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan and Guangxi. The central covers Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan: The western zone covers Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Tibet, Qinghai, Ningxia and Xinjiang.

Tables 4.10 through to 4.12 give some statistics on regional differences for rural enterprises up until the end of 1995. Table 4.10 shows regional shares of rural enterprise employment and gross output value for 1980, 1985 and

1990-1995. The eastern zone share was constant at around one-half of total employment and two-thirds of total gross output for most of the period. This is in spite of the fact that it has only about 40% of the population (41% in 1995 - Statistical Yearbook of China 1996 p.70). The central zone had around one-third of rural enterprise workers and produced just under one-third of total gross output for most of the period, although this figure fell in 1995-1996. Finally, about 15% of people working in rural enterprises were in the western zone; however, over the period it only accounted for around 5% of total rural enterprise gross output, increasing to just over 10% in 1995.

TABLE 4.10
Rural Enterprises
Regional Share of Employment and Gross Output Value
(expressed in percentage terms)

<u>YEAR</u>	<u>EASTERN</u>		<u>CENTRAL</u>		<u>WESTERN</u>		<u>CENTRAL & WESTERN.</u>	
	<u>G.O.V</u>	<u>EMP.</u>	<u>G.O.V</u>	<u>EMP.</u>	<u>G.O.V</u>	<u>EMP.</u>	<u>G.O.V</u>	<u>EMP.</u>
1980	65.0	47.1	30.2	34.5	4.8	18.4	35.0	52.9
1985	63.2	53.0	31.9	32.2	4.9	14.8	36.8	47.0
1990	64.9	49.3	30.7	35.3	4.4	15.4	35.1	50.7
1991	65.7	60.2	30.1	27.4	4.2	12.4	34.3	39.8
1992	66.4	51.5	29.2	32.9	4.4	15.6	33.6	48.5
1993	64.2	47.3	30.6	16.9	5.2	16.0	35.8	52.7
1994	69.4	52.3	23.0	34.2	7.6	13.5	30.6	47.7
1995	66.7	50.9	23.0	32.6	10.3	16.5	33.3	49.1

NOTES:

- (i) For the provinces in each zone see endnotes to table 4.9. (ii) Tibet is excluded because of lack of data, (iii) G.O.V = Gross Output Value (iv) EMP. = Employment (v) The 1980 figures for EMP are for 1981 and, (vi) The 1980 figures are for T.V.Es on their own - see notes to table 4.3.

SOURCE:

Calculated from statistics in *Statistical Yearbook of China* (various years).

Rural enterprises are broken down by sector and zone for 1995 in table 4.11. The central zone has the largest proportion of enterprises in three sectors: agriculture, construction and transportation. The eastern zone has the highest proportion of rural enterprises in two sectors, commerce and industry. However, focusing on enterprise numbers in isolation gives a misleading picture of the importance of each zone. In terms of gross output value the eastern zone produces more than 40% of total output from rural enterprises in four sectors. In industry and commerce & food services - the two main sectors where rural enterprises are involved - (see table 4.3) the eastern zone produces 69.3% and 43% of total rural enterprise output respectively.

TABLE 4.11
Rural Enterprises -
Composition of Enterprises, Employment and Output
by Sector and Zone 1995
(expressed as a percentage of the national rural enterprise total)

	Eastern	Central	Western
<u>Enterprises</u>			
Agriculture	28.4	52.5	19.1
Industry	44.4	36.2	19.4
Construction	31.9	48.9	19.2
Transportation	38.2	40.2	21.6
Commerce & Food Service	37.9	37.6	24.5
<u>Gross Output Value</u>			
Agriculture	51.7	40.5	7.8
Industry	69.3	23.1	7.6
Construction	43.0	36.1	20.9
Transportation	40.8	39.9	19.3
Commerce & Food Service	37.3	46.5	16.2
<u>Employment</u>			
Agriculture	39.2	46.7	14.1
Industry	57.9	29.3	12.8
Construction	41.1	28.9	30.0
Transportation	40.4	40.7	18.9
Commerce & Food Service	41.6	36.4	22.0

NOTES

- (i) For details on the provinces in each zone see endnotes to table 4.9.
- (ii) Tibet is excluded from calculations because of lack of data.

SOURCE

Calculated from statistics in *China Statistical Yearbook 1996*

TABLE 4.12
Rural Enterprise Productivity, Exports and Pre-Tax Profits According To Zone
1994 Compared to 1986

	<u>Gross Output</u>	<u>RATIO (1)</u>	<u>Exports</u>		<u>RATIO (2)</u>	<u>Pre-Tax Profit</u>	<u>RATIO (3)</u>
	<u>Value</u>	<u>1994/1986</u>	million	% of	<u>1992/1986</u>	<u>Yuan/Worker</u>	<u>1994/1986</u>
<u>1986</u>	<u>Yuan/Worker</u>	<u>ratio</u>	yuan	total	<u>ratio</u>		<u>ratio</u>
western	3160	-	489	4.9	-	345	-
central	3562	-	996	10.0	-	532	-
eastern	5372	-	8463	85.1	-	784	-
<u>1994</u>							
western	2882	.912	1199 ^(a)	1.6	2.452	573	1.661
central	7155	2.01	4670	6.4	4.689	1209	2.273
eastern	17216	3.204	73487	92.0	8.683	2536	3.235

NOTES:

(i) All values are calculated at current prices. (ii) For the provinces in each zone see the endnotes to table 4.9. (iii) Tibet is excluded because of lack of continuous data. (iv) RATIO (1) measures the ratio of gross output value (yuan per worker) in 1994 over 1986. RATIO (2) measures the ratio of exports in 1994 over 1986. RATIO (3) measures the ratio of profit (yuan per worker) in 1994 over 1986 (iv) (a) denotes that export values are for 1992.

SOURCES:

Yao (1996) *China Agriculture Yearbook* 1987,1995

These figures are reflected in other indicators of rural enterprise performance. Table 4.12 gives regional breakdowns on labour productivities and profit rates for 1986 and 1994, and on exports for 1986 and 1992. Rural enterprise workers in the eastern zone in 1986 were 70% more productive than workers in the western zone and 51% more productive than workers in the central zone. The figures for 1994 are even more stark. Labour productivity, in 1994 in the eastern zone was almost six times higher than in the western zone and almost two and a half times higher than in the central zone. The statistics on profit rates are similar. The profit rate in 1986 in the eastern zone was 127% higher than the western zone and 47% higher than the central zone. The comparable values for 1994 were 342% and 110%. The eastern zone produced 85.1% of total rural enterprise exports in 1986. In 1992 this increased to 92%. These figures reflect differences in the ratios 1994/1986. In each case the eastern zone outperformed the other zones.

The central government is aware of the regional disparities in T.V.E development and has taken steps to deal with it. Jiang Zemin, at the CPC fourteenth Party Congress in October 1992, signalled the introduction of new measures when he stated: "We shall continue to devote great efforts to developing township enterprises and *particularly support those in central and western regions and in minority national regions*".³⁰ Following this statement, the State Council, in February 1993, issued a "Decision on Accelerating the Development of Township Enterprises in Central and Western Regions". This document detailed plans to allocate an annual figure of 5 billion Yuan, between 1993 and 2000, to support T.V.E development in the central and western zones. The document contains a range of preferential measures - set out as nine policies - which are designed to accelerate the development of T.V.Es in these zones. The document directs banking institutions in the central and western zones to increase their lending to T.V.Es as a proportion of total loans and requires that local financial departments set aside funds for T.V.E development.³¹ The statistics in table 4.10, which are up to the end of 1995, do not shed much light on its effect. This reflects the fact that there has not been sufficient time to this point to determine the effect of this document on regional differences in T.V.E development. The central and western zones' share of rural enterprise gross output value increased in 1993, but it fell in 1994. It increased again in 1995, but the figure was still less than the 1993 share. The fall in 1994 was due to a decline in the central zone share, although the western zone share increased. While, at the time of writing no statistics are available for 1996 so it is impossible to be sure, casual observation nevertheless suggests that the document has started to have an effect on performance across the zones during 1996 and 1997.³²

A number of non-institutional problems with T.V.Es such as product duplication and effect on the environment have been raised in the literature. Some comments on these are made below to paint a broader picture of T.V.Es, but without a macro framework the points made are at best tentative.

Product Duplication and Failure To Maximise Scale Economies

A common criticism of T.V.Es is that they do not maximise scale economies. There is excessive duplication in some industries. The textile industry is a prominent example where T.V.E participation is high, but two points need to be made. The first is that duplication is not restricted to T.V.Es. Duplication is a manifestation of decentralisation or what Qian & Xu (1993) term the "M-Form" structure. With the M-Form structure, the Chinese economy is organised into a multi-layer-multi-regional form according to the territorial principle, in which each region, at each layer, can be regarded as an operating unit. This means that regions tend to be self-contained and self-sufficient. This also means that firms tend to be small and industries less concentrated. Thus, both firms and goods are duplicated across regions.

The second point is that whether duplication is, in fact, a problem is not clear. While there are costs associated with duplication such as inefficient use of scale economies, there are some potential benefits. For example Qian & Xu (1993 p.28) point out that duplication might reduce vulnerability to external shocks and increase the reliability of supplies under uncertainty. Goodhart & Xu (1995 p.22) suggest that duplication facilitates technology diffusion between firms and across regions. The reduced emphasis on specialisation (the detailed division of labour), with decentralisation, also suggests the potential for positive trade-offs with collective learning (the social division of labour) along the lines suggested by Aoki (eg 1984 1990) in the context of the J-mode. This point is explored in detail in chapter six.

In addition the benefits and costs of the M-Form structure also need to be considered. With decentralisation, the major responsibilities of local governments revolve around regional development and welfare. The local government has to raise revenue on its own and, therefore, has a strong incentive to set up and support local enterprises for revenue generating purposes. There are, of course, potential costs in this process - eg. if local governments engage in non-co-operative games to externalise costs to other localities, but there are also pluses. The limited resources of local governments makes it hard for them to bail out loss-making T.V.Es. While it is difficult to verify this seems to be the reason for harder budget constraints in the non-state sector compared with the state-owned sector. The M-Form has also been important in encouraging regional development. It fosters a horizontal relationship between regions which facilitates regional competition and imitation. The regional governments compete with each other to see which can increase incomes the fastest. The M-Form also provides an avenue for regional governments to mimic the successful development strategies of other regions which has been important in generating inter-regional learning. The fact is that while, from a policy viewpoint, it is not entirely satisfactory to say that the relative merits are uncertain, what is clearly needed is more detailed investigation to clarify the conflicting issues.

Poor Quality Goods

T.V.Es have been criticised on two related grounds. The first criticism is that the standard of the goods which T.V.Es produce is poor. The second criticism is that T.V.Es attempt to pass off inferior products as "famous brands" in a fraudulent manner (Ody 1992 p.18). These issues present real problems, but neither problem appears to be restricted to T.V.Es. While actual evidence beyond casual empiricism is limited, the evidence that does exist suggests that the standard of T.V.E output is about on a par with the state-owned sector. The State Economic Commission, in 1987, studied 800

firms to see whether state standards were being met. The investigation found that, in large S.O.Es 90% of the goods met the state standard. This figure was higher than in T.V.Es where 78.3% of goods met state standards, but the weakest performers were small to medium size S.O.Es where 72.8% met specified standards.³³ It is also worth pointing out that the government has taken some steps to deal with concerns of fraud and inferior product design. While enforcement is, at times, problematic, a legislative framework is in place to deal with both fraud and failure to meet recognised standards. This appears to be having some effect on lifting standards. It was reported that in 1996 more than 22,000 T.V.Es passed the State quality control inspections. It was also reported that more than 1000 T.V.Es have adopted internationally recognised quality-control measures and standards.³⁴ The legislation is not perfect, but it needs to be remembered that similar difficulties with inferior goods have arisen in Eastern Europe where mass privatisation occurred often without sufficient consumer protection legislation.

Environmental Issues

There has been some concern expressed about the effects rural industrialisation is having on the environment. For example Findlay *et al* (1994 p.186) state: "The scattered nature of the growth taking place and the lack of effective pollution controls, has resulted in a deterioration [in] the quality of soil, water and air". There is a fair bit of anecdotal evidence to support this claim, but the extent of the problem, at an empirical level, is not clear. Findlay *et al* (1994 p.186) refer to a survey of T.V.E pollution levels carried out in 1991 which found that 366,000 of the 575,000 enterprises examined were major polluters.³⁵ When enterprises in the same industry were compared in the mid-1980s it was found that those in rural areas emitted ten to twenty times more pollutants than those in urban areas.³⁶ In addition, in the mid-1980s one-third of the water surfaces in three

industrialised regions in south Jiangsu (Suzhou, Wuxi and Changzhou) was polluted with water at or below grade five, and most of the water in Wuxi County (one of three counties in the Wuxi region) was below grade four.³⁷

A survey, which was conducted by the Chinese Academy of Sciences in 1988, found that pollution was particularly severe in two areas where T.V.Es are concentrated - southern Jiangsu and Shanghai.³⁸ But, the actual number of T.V.Es which are serious offenders in Jiangsu, the larger T.V.E province of the two, seems to be comparatively small. A comprehensive survey of Jiangsu's T.V.Es, during 1989, identified just 3.8% of the firms as "serious" polluters (and a further 28.5% as "light" polluters).³⁹ Moreover, a slightly more recent World Bank survey conducted in 1991 indicates that rural firms accounted for only 10.7% of waste water discharges, 9.4% of air emissions, and 11% of solid wastes. This is below their share of industrial output (World Bank 1992). However, as Ody (1992 p.20) points out, this in part reflects the greater concentration of T.V.Es in light industries and their limited presence in the chemical and smelting industries which are the leading sectors for waste water discharges. There is some evidence to suggest the situation has also improved in the last few years. In 1996, for every 10,000 yuan of growth in industrial output value, the levels of solid, liquid and atmospheric wastes were 57 tons, 31,500 cubic metres and 1.57 tons - down 52%, 50% and 50% respectively from 1990.⁴⁰ Thus while press reports suggest that T.V.E pollution is a problem, there is conflicting empirical evidence on its extent.⁴¹

4.5 IMPLICATIONS AND CONCLUSION

While T.V.Es do present problems, the discussion of a few of the main "wider" problems in the last section is inconclusive. The reason is that the extent of the problems are not clear. We are restricted to making cautious judgements on the limited evidence that is available. In the end, while we cannot conclude whether T.V.Es will be successful, it seems reasonable to

suggest that, on balance, T.V.Es have been successful to this point. This said, two further points need to be emphasised. The first is that when post-socialist transformation is viewed as open-ended, institutional "problems" due to informal ties between T.V.Es and T.V.Gs might not be problems at all. This point, which is at least debatable, is overlooked in the post-socialist transition literature. The second is that, while the evidence is at best sketchy, most of the problems that T.V.Es present appear to mirror difficulties facing other enterprises. The standard of goods produced and concerns about the effect on the environment are two examples. This is not to suggest that these problems should be ignored, but it does recognise that the process of post-socialist transformation is a difficult one. The fact is that it takes time to get consumer and environmental protection legislation in place and, once it is in place, to iron out the difficulties. A point made above is that most (if not all) of the countries in Eastern Europe, which pursued rapid privatisation, are facing similar consumer and environmental protection issues. This suggests that these problems raise broader issues for the process of post-socialist transformation than whether property rights are or are not ambiguous *per se*.

The first point, however, is the most contentious and, at the same time, if valid, presents the biggest challenge to the transition literature. This chapter has stressed that the main advantage which articles such as Chang & Wang (1994) and Weitzman & Xu (1994) have is that they attempt to explain the success of what exists rather than focusing on completing the reform. A serious attempt to understand T.V.Es has to come to terms with why they have worked with ambiguous property rights, because it is the economic success of the T.V.E sector which presents the main challenge to the post-socialist transition approach. The view that T.V.Es would have performed better in the past, or will perform better in the future as joint stock companies, overlooks two important facts. The first is that T.V.Es have outperformed firms with better-defined property rights in Eastern Europe, and the second is

that T.V.Es are expected to continue to perform well in the future. But, to what extent do the explanations in papers such as Weitzman & Xu (1994) *et al* challenge the post-socialist transition approach as it has been applied in Eastern Europe? To put it in different terms, can the explanations for the success which T.V.Es have had be generalised to Eastern Europe or is the co-operative culture theme just a Chinese (or East Asian) phenomenon?

Weitzman & Xu (1994) make no attempt at all to challenge the post-socialist transition approach in Eastern Europe. The opposite is, in fact, true. Weitzman & Xu (1994 p.86) state: "If the ideas being put forth here are sound, the value of λ is essentially the product of a path-dependent historical heritage. The costs of changing culture are very high, if culture is changeable at all. So it simply may not be a realistic option for Eastern Europe to be thinking in terms of the Chinese model. It may be that Eastern Europe has no choice but to take the difficult route of developing and strengthening traditional private property rights appropriate to a low- λ society." ⁴² The view that T.V.E success is due to co-operative culture at the societal level is challenged by Pei (1994, 1996). He argues that "the success of T.V.Es is mainly due to the specific [cooperative] elements of a village or rural community, and not to general cultural elements" (1996 p.44). To some extent the differences which Pei claims exist between himself and Weitzman & Xu are semantic. The "inter-specific resources", which Pei stresses are the basis of co-operation in the village - "kinship ties, ... trust and the co-operative spirit of the village group" (1996 p.60) - are also the foundations for the cooperative culture theme in Weitzman & Xu. However, an advantage which Pei's argument has is that it focuses attention on a "group" rather than "society" as the basis for cooperative action. The notion of a "group" here refers to a village-township, district or region. When the focus is on the potential for cooperation in a group, the cooperative culture theme ceases to be an Asia-Europe issue. Weitzman & Xu (1994) state in

the above passage that cooperative culture is a function of path-dependent historical heritage. The point is that if the "group" rather than "society" forms the basic unit, the potential for group cooperation - whether the "group" is in Eastern Europe or Asia - becomes a function of path dependent historical heritage. This is important because writers such as Stark (1990) and Van Ees & Garretson (1994) stress the relevance of path dependence in Eastern Europe. The focus on "group" path dependence is the starting point for generalising the cooperative culture theme to the Eastern European case.

A view that emanates from the Weitzman & Xu paper is that T.V.Es are an example of an emerging East Asian capitalism. If this is the case, the lessons for post-socialist transition in Eastern Europe are limited, but the problem is that this perspective, to some extent, revives discredited sociological theories of the J-mode which suggested that there were specific cultural factors underpinning Japanese success stories which could not be replicated elsewhere (see Friedman 1988, Aoki 1990). Whether this is the case is debatable. However, what does seem clear is that if there are lessons in the T.V.E experience for Eastern Europe, the J-mode needs to be seen as part of a broader cooperative culture theme which has a more general application. When the J-mode is seen as part of a broader collective learning culture T.V.Es begin to reflect Best's (1990) "new competition", encompassing elements of the J-mode and the flexible specialisation and techno-economic paradigms. The relationship between these themes, and their inter-relationship with the market-hierarchies rationale, was explored in detail in the last chapter, but two points need to be made now. The first is that, in this context, it is T.V.Es as part of a broader collective learning culture, rather than perceived analogies between T.V.Es and the J-mode, which challenge the post-socialist transition approach in Eastern Europe. The second is that to suggest that post-socialist transformation should be seen as open-ended is not to imply that the collective learning theme has blanket application. What

it does entail is recognising that informal ties, in some specific areas, or in specific instances, where there is a collective learning culture, have benefits over arms-length transactions and that this is a function of path dependence. This is taken up at a more theoretical level in chapters five and eight. In the next chapter a regional model of T.V.Es is developed in the context of a wider argument that T.V.Es are a specific example of a broader literature on regionalism. In chapter eight the latter issue is explored in more detail.

CHAPTER 5

THE TOWNSHIP AND VILLAGE ENTERPRISE SECTOR AS A SPECIFIC EXAMPLE OF REGIONALISM

5.1 INTRODUCTION

The last chapter suggested that T.V.Es in China represent a seeming challenge to standard property rights critiques. This chapter draws on the collective learning literature to provide one possible explanation for the success of the T.V.E sector in the presence of vaguely-defined institutional arrangements. The main argument will be that reputation effects underpin the functioning of informal institutions. This idea will be developed in the context of a broader argument that the T.V.E sector shares characteristics with or is in effect a subset, or specific example of, a broader literature on regionalism. An attempt will also be made to draw some parallels between the T.V.E sector and European/Anglo-American regionalism with a view to making some preliminary remarks about the lessons which T.V.Es raise for post-socialist transformation in Eastern Europe.

The success of the T.V.E sector has led some commentators to at least pose the question: should Russia have copied China? (Johnson 1994, Layard 1995). So far, the answer has tended to be no, with theories stressing the differences between China and Eastern Europe, rather than the potential similarities (eg. Qian & Xu 1993 - "M-Form" versus "U-Form" hierarchical planning structure; Weitzman & Xu 1994 - differences in the degree of cooperative culture and Yang 1994 - differences in the degree of division of labour). This chapter, however, suggests that there are similarities in the existence of regional differences. And, therefore, post-socialist transformation should perhaps be seen as an open-ended process in Eastern Europe as well as Asia. The chapter is divided into three main sections. The main ideas in the chapter are contained in the next section where a regional model of the T.V.E sector will be presented.

The argument that the T.V.E sector is a specific example of a broader new regionalism is developed in section 5.3. The last section contains some comments about the potential relevance of regionalism to Eastern Europe.

5.2 A REGIONAL MODEL OF THE TOWNSHIP AND VILLAGE ENTERPRISE

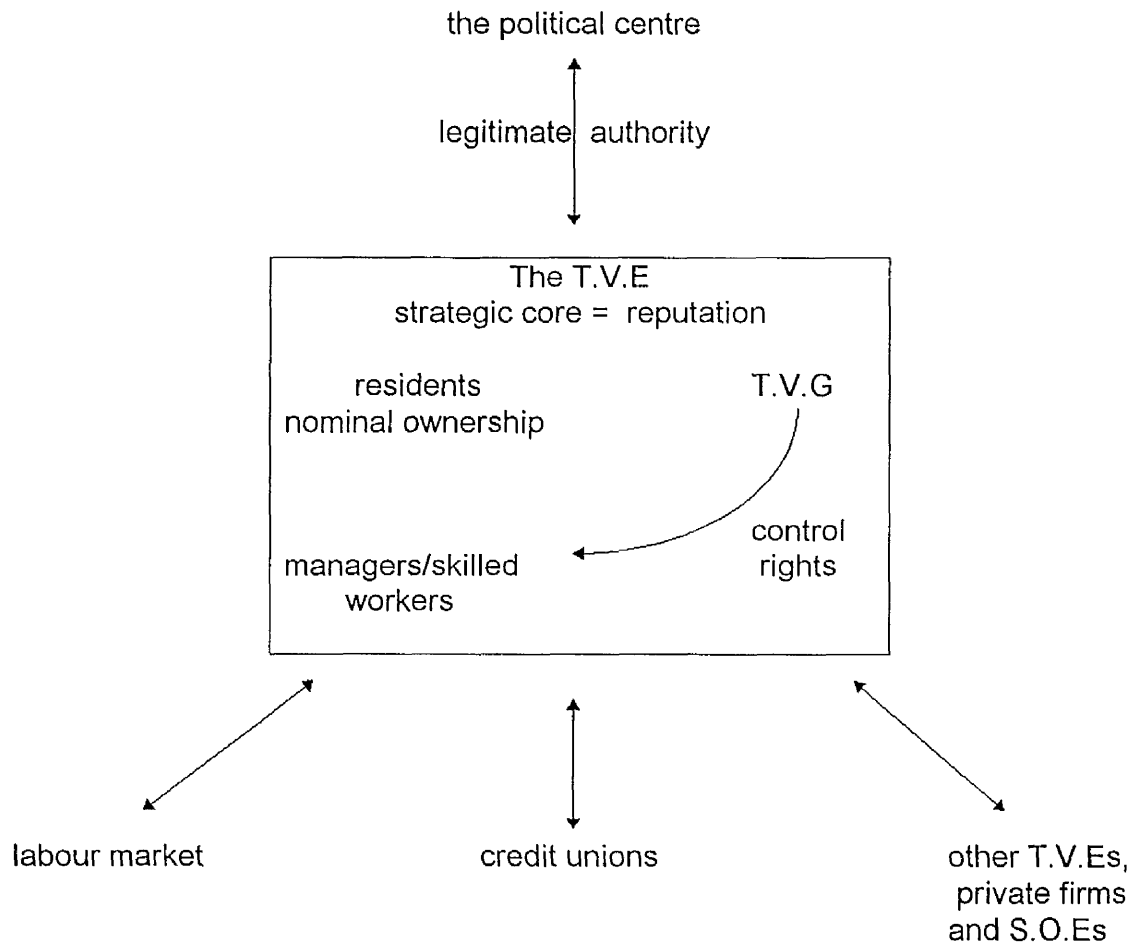
(i) TOWNSHIP AND VILLAGE ENTERPRISES AS A SET OF STRATEGIC ALLIANCES

Overview

This subsection sketches a broad overview of the model. The specific issues that the model raises are considered in more detail later in the chapter. The basic concept, which underlies the theorising, is that the T.V.E consists of a strategic core and a series of external strategic alliances or inter-organisational incentives (see Reve 1989). These ideas are presented in schematic form in figure 5.1. The T.V.E is depicted as a strategic core which can be visualised as "reputation capital" or, in broad terms, "goodwill". The strategic core or internal structure of the T.V.E is presented, in figure 5.1, as a juxtaposition of ownership and control. The nominal ownership of the T.V.E, consistent with the approach taken in Chang & Wang (1994), is assigned to the local residents, but the rights to control the T.V.E are depicted in dynamic terms. The control rights rest, at the start, with the T.V.G. However, over time, an arrow (in figure 5.1) shows control rights shifting from the T.V.G to the managers and the skilled workers.

There are various strategic expansion paths, in figure 5.1, which are external to the T.V.E. These strategic expansion paths are informal contracts that link the T.V.E to the political centre (the central government) and to the other entities in the regional network. The regional network, which encompasses the labour market, regional banks - including rural credit co-operatives - and other enterprises, will often be location-specific. Qian & Xu's (1993) M-Form argument

FIGURE 5.1
The T.V.E. as an Internal and External Strategic Framework



is important in this respect. With the M-Form structure, the Chinese economy is organised into a multi-layered multi-regional form according to the territorial principle in which each region, at each layer, can be regarded as an operating unit. The regional network for most purposes is consistent with a low level tier in this multi-regional framework, but the basic principles underpinning a regional network (the importance of reputation and informal contracts) need not be

location specific. The notion of a regional network rests first and foremost on the existence of an identifiable group which contracts on the basis of trust and social ties. Here the term "trust" is used to refer to a means of reducing uncertainty and risk and enhancing cooperation in the context of business contracting (see further Deakin *et al* 1994, Arrighetti *et al* 1997, Burchell & Wilkinson 1997).

The vaguely-defined character of much of the contracting within the regional network suggests elements of a clan structure. In transaction-cost terms, these relations represent a distinct form of economic coordination which lies somewhere between market and hierarchies (Arrighetti *et al* 1997, Powell 1990, Ring & Van de Ven 1992). The notion that the T.V.E can be seen within a regional network of transactions which are, at best, less than arms-length raises many questions. These include: (i) What distinguishes the strategic core from the *external* inter-organisational incentives? (*ie.* what determines the boundaries of the firm?) (ii) Why are control rights, within the T.V.E, (at least in the embryonic stages) given to the T.V.G? (and why do control rights, in most cases, shift to managers and skilled workers over time?). (iii) Most of the literature on clans stresses the need for a recognised legitimate authority to underpin the process of building collective norms. Thus, to the extent that T.V.Es can be depicted as clanlike entities between markets and hierarchies what is the source of legitimate authority? The rest of this section attempts to provide answers.

External aspects of the Township and Village Enterprise

There are a series of informal institutions which support the T.V.E. The practice of informal contracting is widespread and embedded in the regional network. This is widely recognised among local officials. "Concerning actual T.V.E contracts, law officials and policy makers report that such transactions are often based on oral agreements instead of written contracts. Even in the case of written contracts, it is often the case that they are incomplete and unspecific in items, or there is no specific punishment" (Weitzman & Xu, 1994 p.85). While

primary documentation of this phenomenon is lacking on the whole, casual empiricism provides some general examples. First, informal contracts exist in inter-firm transactions. T.V.Es producing similar products often integrate into industrial groups in order to raise funds and promote mutual interests such as sales and purchases. The members of the group, which typically consist of a number of different regional firms with different ownership structures, help each other with fund-raising activities and in times of financial difficulty. Goodhart & Xu (1995) and Liu (1989), amongst others, point out that in most cases the relationship within the group is informal in the sense that long-term reputation is more important than explicit contracts. The concept of *germen* (buddy-ship, commitment and loyalty) underpins these informal relationships. A series of case studies in Anhui Province noted that most T.V.Es deliberately avoided formal contracts so as to maintain or to strengthen the *germen* relationship. The reason for this was their belief that defining personal relationships through written contracts undermined the *germen* spirit (Cai 1990, Wu 1996 p.452).¹

The capital market provides a second example of informal contracting. The legal rights of creditors are not well protected and more generally collaterals are uncertain because of imperfect information. Therefore, it is common for T.V.Es to provide each other with mutual guarantees or borrow from individuals within the T.V.E. T.V.Es also often borrow on the basis of a guarantee from the T.V.G, but the actual guarantee is very rarely formalised. Instead, the process is consultative, where the T.V.G's views and priorities are sought. If the T.V.E's loan application has the support of the T.V.G, it is nearly always approved on the basis of an implicit understanding that the T.V.G. (and therefore, the local community) will absorb the risk.² Naughton (1994, 1995) argues that T.V.G sponsorship greatly enhanced T.V.Es' access to capital which is an important reason for their growth. He writes (1995 p.153): "By contrast, the experience of other transforming socialist economies has been that new start-up businesses proliferate, but ... have difficulty getting access to capital and as a result remain small, undercapitalised and dependent on formal capital markets". These points

relate to collectively-owned T.V.Es which is the chapter's main focus. Nevertheless, it is worth noting that even among privately owned T.V.Es informal capital markets are popular. A common practice in Wenzhou, where most T.V.Es are private, is *zhouhui* (forming an informal credit union). The credit union is formed between people who know each other well and is based on business trust rather than formalised contracts (Goodhart & Xu 1995 p.35).

The third example of informal contracting occurs in the labour market. Collectively-owned T.V.Es tend to operate without explicit labour contracts or follow practices that lie outside the scope of formal arrangements. For example, Goodhart & Xu (1995, pp.34-35) note that if the T.V.E is facing economic hardship a common practice is to close the firm down for a short period to reduce costs. Another reason for periodic closure in the past was that prior to the tax reform measures T.V.Es received tax concessions in the first three years of their life. Thus, it was common for T.V.Es to close down towards the end of the first three years and re-open with a different name. When the T.V.E closes down it typically makes subsistence payments to its workers which are a fraction of the worker's original wages. This practice often takes place on an informal basis and, thus, lies outside written labour contracts. It gives T.V.Es greater flexibility to take advantage of tax loopholes and in times of financial difficulties.

The results from field research confirm the advantages of informal arrangements in the labour market. In Lin *et al's* (1992) sample of industrial T.V.Es in Yuanping County, Shanxi Province "there were almost no cases in which employees were dismissed because of lack of demand" (Lin *et al* 1992 p.262). Other field research suggests that workers are quite willing to take wage cuts in times of economic hardship. In 1986 the State Statistical Bureau (SSB) and the Developmental Institute of the People's University sampled workers in 200 rural enterprises (most of which were T.V.Es) in Hubei, Sichuan, Guangdong, Zhejiang, Jiangsu, Anhui, Hebei, Liaoning, Shanxi and Gansu. The first half of 1986 was a period of contraction and wages levels in the sample enterprises fell.

A total of 77% of workers said that they were satisfied taking a wage cut given the economic conditions while just 4% expressed dissatisfaction. Among those who expressed neither satisfaction nor dissatisfaction (19%), 71% showed "understanding and sympathy for the enterprises and were willing to continue to work there". When asked about whether it was better to cut jobs or wages 36% of workers favoured a reduction in wages rather than jobs which is double those who favoured cutting jobs (18%) - (results reported in Zhou & Hu 1987 p.131).

The close relationship between agriculture and rural industries also contributes to making the rural labour market flexible. Workers are willing to accept temporary lay-offs and/or substantial wage cuts because opportunities exist for most to return to agriculture. To illustrate, in the joint SSB and People's University sample, 61% of workers retained their share of contracted farmland (Zhou & Hu 1987 p.131). Hence, agriculture and rural industry complement each other. For example in the Hela Commune Agricultural Machine Plant in Wuxi "in the busy farming season [workers in the factories] went back to work in their fields and in the slack season they worked in the plant. Whenever labourers were needed for intensive operations in vegetable farming and fishing, they were also released by the plant. Thus there was a flexible allocation of labour time among various branches of the rural economy" (Mohanty 1993 p.35).³

Each of these informal relationships - in inter-firm transactions, in the capital market and labour market - represent strategic alliances. Nakatani (1984), writing in the context of the J-mode, suggests that informal institutions perform the role of an implicit mutual insurance scheme, in which firms are both insurers and insured at the same time. The evolution of informal institutions, according to Nakatani (1984), represents a direct response to imperfect capital markets.

"One of the essential functions of the capital market is to allocate risks efficiently among different investors in the economy, but, if the capital market is imperfect and management is in a position to worry about the

business risks, in some way or another, then the grouping of firms can be regarded as an ingenious solution to the problem of non-existence of contingent markets for management risk" (Nakatani 1984 p. 229).

These comments, while directed at the J-mode, explain part of the reason for the formation of informal institutions in the T.V.E sector. Most commentators recognise that the capital market in China, at least outside the state sector, is underdeveloped (see eg Cheng & Malcom 1994). However, as far as capital markets go, the allocation of risk, of course, is not their sole function. The capital market also serves as an avenue to channel savings from individuals to enterprises. The informal arrangement where T.V.E residents pool their financial resources (*ie. jizi*) in order to fund the T.V.E is one institutional response in this regard, but the role which informal institutions play as strategic alliances in the T.V.E sector run deeper than this. The stress placed on informal institutions rather than formal contracts seems to be a response to deficiencies in the explicit institutional framework - strong legal structure, well defined property rights *etc.* - rather than *just* an underdeveloped capital market.

The informal links which the T.V.E nurtures (*ie. strategic expansion paths*) serve a similar role to that which Nakatani (1984) discusses, but in a broader sense. The development of informal institutions between T.V.Es serves to allocate the risk, for example, associated with contractual hold-up in the absence of a well defined legal framework for settling disputes. The distinction between "soft" and "hard" contracting is relevant in this regard (see MacNeil 1980, Williamson & Ouchi 1981 pp.361-362). The concept of hard contracting refers to standard arms-length transactions where there are formal contracts governing the relationship. The concept of soft contracting, on the other hand, presumes a much closer relationship between the parties where formal contracts are much less complete. Thus, with soft contracting, an elaborate informal governance

structure (to borrow Williamson's term), which includes *inter alia* accepted norms of behaviour, substitutes for the role of explicit or written sanctions.

The strategic expansion paths fill the role of an extended informal governance structure in the T.V.E. soft contracting setting. The design of the transaction represents a decision variable. To illustrate, think of relational contracting involving different degrees of "softness". This involves considering a spectrum where there are two extremes: (i) where the relationship is deterministic - *ie* specified, in its entirety in a formal contract and (ii) where the relationship is informal meaning no formal contracting *at all*. The design of the transaction is a decision variable because moving along this spectrum involves trade-offs. Moving from deterministic to informal contracting, for example, involves sacrificing certainty for added flexibility. The extent to which the parties to the transaction will be prepared to make this trade-off, will depend on their confidence in the trading relation. But, the trading relation, it will be argued below, is a function of reputation. The T.V.E's reputation for meeting its informal obligations, in this sense, acts as the real surrogate for explicit rules.

The strategic expansion paths represent an attempt on the part of the T.V.E to place itself in a position where potential costs will be minimised in the event of a dispute. The incentive for the T.V.E is to develop bilateral (transaction specific) trust relations. This involves nurturing its informal relationships with other entities in the regional network, such as helping other T.V.Es to raise capital, as a means to promote goodwill. This also involves avoiding courses of action detrimental to the trust relations it builds up. The immediate parties to the soft contract are the ones that stand most to benefit if the exchange is successful and have the most to lose if the contract falls through. Thus it is in the interests of the T.V.E to meet its informal responsibilities even if there is no formal sanction if it does not. This is true because even outside the specific bilateral (transaction specific) relationship, if one of the parties defaults, its wider reputation as a reliable soft contractor will be dented, thus affecting its ability to

enter into other transaction specific relations. The need for an explicit legal framework is reduced because implicit contracts tend to be self enforcing.⁴

The role of reputation in defining the "strategic core"

The T.V.E, in figure 5.1, is depicted as a "strategic core" which, it was earlier claimed (without supporting argument), can be seen as reputation capital. However, this raises an important issue not addressed so far. What is the theoretical basis of the strategic core, and what distinguishes the strategic core from the external strategic alliances? A possible answer to this lies in marrying Kreps' (1990) work on reputation effects with the notion of asset specificity which has been stressed in most of Williamson's articles (see eg Williamson 1979 1981 1989). Asset specificity, which Williamson repeatedly claims is the most important transaction dimension, refers to the extent to which the investment is idiosyncratic or transaction specific. Williamson (1979) distinguishes between three different degrees of asset specificity. These are non-specific, semi-specific and highly specific. He argues that classical market contracting will be efficacious when assets are non-specific to the trading parties, but bilateral market contracting will take over if assets are semi-specific and internal organisation will displace bilateral contracting if the assets are highly specific.

These ideas can be developed in the context of the strategic core/strategic alliance differentiation (see Rumelt 1982, Reve 1989). The strategic management literature maintains that the strategic core should be limited to core assets which are essential to meeting the firm's strategic objectives. These core assets can be used to realise the firm's objectives through bilateral governance (nurturing strategic alliances) and/or classical market contracting. In this sense the line which separates the strategic core (internal to the firm) and the strategic alliances (external to the firm) depends on how transaction specific the asset is. The boundaries of the firm are restricted to its core assets which, in Williamson's terms, are highly asset specific. Outside of the firm,

assets which are semi-specific can be obtained through strategic alliances or bilateral trust relations, and non-specific assets can be exchanged in the market.

The core (specific) assets of the firm can be of a number of different sorts. Williamson (1989 p.143), for example, mentions site, human asset and physical asset specificities among others. But it is impossible to make generalisations about core assets of this sort. There are, for example, some T.V.Es whose core assets include technological resources and others whose core assets revolve around particular management practices. The literature on the strategic firm, as mentioned above, suggests that the firm's core assets form the basis for realising economies in semi-specific assets via bilateral trust relations (see eg Reve 1989 pp.146-151). Of course, when the external institutional framework (legal system, property rights *etc*) is well developed such as in western European capitalist societies the importance of bilateral soft contracting will be reduced. There will always be some informal contracting based on flexible governance and social convention (see Macauley 1963, Williamson 1975 pp.107-108, Al-Najjar 1995), but the existence of a well-defined institutional framework provides more opportunities for deterministic exchange. However, where the explicit institutional structure is not strong, as in the T.V.E sector, the manner in which core assets act as the basis for strategic alliances takes on added significance. However, the problem is that simply listing a range of disparate core assets that T.V.Es might or might not have as the extant literature does, is not a theory of how T.V.Es, which often have widely differing core assets, are able to cultivate bilateral relations in a soft contracting setting.

The notion of reputation effects developed in Kreps (1990) provides the mechanics for more general theorising. This proposition rests on three points. The first two (I hope) should be readily acceptable. The third is, perhaps, more debatable. The first point is that reputation is an intangible core asset. There is widespread acceptance that core assets can be, and often are, intangible (see eg Itami 1987). The idea that *reputation* is an intangible core asset rests on

accepting that there are certain standard norms of behaviour that define a T.V.E and are specific to that particular T.V.E. These norms of behaviour, which determine the T.V.E's reputation, can be mimicked but they cannot be facilely transferred (or redeployed in Williamson's language) without loss in productive value - *ie.* reputation is highly asset specific. If the idea that reputation is a core asset is accepted it is a small step to recognise the second point that all T.V.Es have "reputations" relating to standard of service, whether it meets its implicit obligations *etc.* The third point is that reputation, in a broad sense, is an umbrella for firm specific core assets. When outside entities decide whether or not to enter into an informal (*ie.* a non-deterministic) relationship with the T.V.E, it is on the basis of whether the T.V.E has a culture or routines which are conducive to it meeting its commitments, rather than being dependent on what specific core assets the T.V.E might or might not have. This third point comes close to the notion, which is explored in Kreps (1990), that reputation is evident in corporate culture. To put it in different terms the argument is that reputation, as a core asset, is reflected in principles of conduct which are made visible to potential soft trading partners through the standard of past outward behaviour.

The T.V.E, through this process, acts as a mechanism to allocate the surplus *ex ante* (see Chang & Wang 1994 pp.439-441 on the distribution of benefits between the T.V.G and local residents). This needs some explanation. When entering into an informal contract the problem is that neither of the parties can be sure *ex ante* how the other will exercise its discretion in the event of unforeseen contingencies. However, it seems reasonable that if one of the parties fears that the other might not meet its informal obligations, it will either not enter into the informal relationship at all or it will require a risk differential to be built into the contract. A similar argument is made in Kreps (1990) as far as hiring labour. He argues that workers will require a compensating differential in their wages if they expect the firm to use its discretion in an unreasonable

manner. The incentive for the firm to develop and maintain a reputation for the appropriate exercise of its discretion, thus, is that if it fails to meet reasonable behaviour standards this will impose extra costs on hiring future workers.

However, there is no reason why this argument should be restricted to the labour market. This applies *a fortiori* where there are informal contracts. The incentive for the T.V.E to cultivate a reputation for meeting its informal obligations is that if it does not it will impose extra costs, manifest in a risk premium, on forming informal contracts. The flip side of the coin is that a "good" reputation forms the basis for strategic alliances at low cost because the risk of default to the other party is reduced. The risk differential, in this sense, varies inversely with reputation - *ie.* the better the T.V.E's reputation, the lower the risk differential. When the risk differential is marginal the savings to the T.V.E, in terms of contracting, represent appropriable rents. However, when the danger of default is great (or perceived to be great) appropriable rents will be a decreasing function of the risk differential. It is important to remember that the reputation of the T.V.E represents a long-term investment on behalf of both the T.V.G and township-village residents in an intangible asset. Thus, through cultivating strategic alliances, reputation generates economic rents because it serves the same function as alleviating opportunism as depicted in Klein *et al* (1978).⁵

The reputation effect has been criticised. Two of the main objections to the reputation mechanism are that: (i) sometimes it is difficult to recognise whether the firm has acted in an unfair manner and (ii) the cost of communicating information, regarding reputation, to other parties might diminish its penal effect. These criticisms are relevant in a broader sense, but might have less force in the case of most T.V.Es (at least in "traditional" T.V.Es). The first reason is that most collectively-owned T.V.Es are readily identifiable with a central regional entity - the T.V.G. Variations in the conduct of T.V.Gs might, therefore, be easier to monitor than, say, a board of directors if the T.V.E was a private enterprise.

The second reason is the peculiar communal character of the T.V.E. This is particularly so in the case of smaller village enterprises where most people are likely to know each other and informal institutions are often built on personal and familial ties. However, even some of the township enterprises, which operate in an environment where the parties might not be on personal terms, still nurture informal institutions within a relatively self-contained regional network. And the cost of communicating reputation effects within a regional web network is likely to be much less than in non-regional based economies. This said, a few comments on the limitations of regionalism are needed. I am not suggesting, as Piore & Sabel (1984) do, in the context of the broader literature, that regionalism presents a complete post-Fordist alternative to mass production. If reputation effects do underpin groups of firms such as the T.V.E regional network, the limitations are clear. Goodhart & Xu point out the following in this respect:

“The effectiveness and arrangements of informal institutions varies under different circumstances. For example, such informal relationships are more effective, more important, and more widespread in village enterprises than in town enterprises *because of the closer relationship between the firm and the residents*” (1995 p.35 emphasis mine).

The criticisms of the reputation effect are relevant here. The efficacy of the reputation mechanism is likely to depend on how close the relationship is between members of the regional network. The size of the group (or region) might also be pertinent in terms of communicating information about reputation. At some point, in terms of degree of closeness and size, the reputation effect will cease to be an effective mechanism to support informal institutions. This issue, which has to be addressed for larger township enterprises whose strategic alliances are often inter-regional, will be considered in chapter six where some parallels are drawn between the external contracts of T.V.Es and the J-mode.

(ii) THE MERITS OF INFORMAL AND FORMAL INSTITUTIONS AND THE PROCESSES
UNDERPINNING INFORMAL INSTITUTIONS

To this point it has been argued that the T.V.E enters into informal contracts based on its reputation. Moreover, it has been postulated that reputation is a core asset common to all T.V.Es. However, so far we have not addressed two important issues. The first is under what circumstances informal institutions might be more efficient (in terms of being growth enhancing) than formal institutions and, related to this, whether informal institutions can explain the growth performance of T.V.Es relative to S.O.Es. The second involves some consideration of the process underpinning the evolution of informal institutions.

The Difference Between Formal and Informal Institutions

The very issue of what an institution is, is controversial (see Menard 1995, Khalil 1995). While not entering into that debate, most commentators accept that both markets and hierarchies are institutions. For example, Menard (1995) treats "institutions" as an umbrella label embracing both markets and organisations. Williamson (1991), takes a similar approach, positing markets and hierarchies as varieties of governance structures. Hierarchies and markets are treated here as formal institutions. The reason is that there are formal constraints on both hierarchies and markets. There are command constraints within hierarchies defining vertical information flows. The "invisible hand" with well-defined contractual rights act as formal constraints on horizontal exchange in the market. However, in the middle, the constraints on hybrids or networks are often informal. Hybrids contain elements of both market and hierarchies, but lie outside the constraint of both. Hybrid contracting is inter-organisational so it is not subject to command constraints which are intra-organisational. Hybrid contracting also tends to be based on long-term reputation rather than written contracts so, to this extent, explicit legal sanctions tend to take a back seat role.

The relative advantages of formal and informal institutions

Given that informal arrangements are popular substitutes among T.V.Es for formal alternatives, the question arises under what conditions do informal institutions make a positive contribution to T.V.Es and when (if ever) will informal institutions be preferable to formal institutions? These issues can be examined at a few different levels. At the most basic level, at least to begin with, most informal arrangements emerged because formal alternatives were not available. The absence of a well-defined legal framework, for example, encouraged implicit inter-firm arrangements and the absence of well-developed capital markets contributed to the growth of informal rural credit co-operatives. At this level it is clear that informal arrangements are preferable to none at all, but it is not obvious that informal arrangements are preferable to both formal and informal institutions together. For example, if there was a well defined legal framework to settle disputes the parties would be freer to choose the trading environment - ie. the parties could enter into either a written contract or one based on reputation.

This, however, overlooks the difficulties inherent in creating formal institutions in (post) socialist economies and the existence of market imperfections in (post) socialist economies. With respect to the first point, positing a simple choice between formal and informal institutions on *a priori* grounds assumes *ceteris paribus* from a systems viewpoint - ie. formal and informal institutions are in place, as in established capitalist economies, or can be put in place at zero (or close to zero) cost. The problem is that (post) socialist economies are not starting from a point where formal and informal institutions represent costless alternatives. There are arguments on both sides of the big bang versus gradualism debate (see section 2.2.5), but what is undeniable is that where the authorities tried to introduce a series of formal institutions in rapid succession in Eastern Europe there were negative results, at least in terms of output levels. Thus introducing formal institutions might not be possible (or desirable) at least

in the shorter term. Informal institutions, of course, also entail costs which become more manifest as T.V.Es grow in size and informal avenues are no longer sufficient. The lack of a well-developed capital market in rural areas is one example where the absence of formal alternatives is now impeding further T.V.E growth. However, the costs involved here at least appear to be the lesser of two evils when compared with the costs of trying to introduce formal institutions too fast as occurred in Eastern Europe. Thus, at one level informal institutions, among T.V.Es, have acted as (imperfect) substitutes for formal institutions while the latter have been, and continue to be, gradually introduced.

The second point is that the existence of market imperfections in (post) socialist economies makes informal institutions more important, in terms of obtaining capital and inputs, than in established capitalist economies. This relates to the fact that (post) socialist economies either are, or are emerging out of economies where capital and resources are difficult to obtain. An example is the point made earlier that T.V.Es often borrow from lending institutions, each other or local residents on the basis of a guarantee from the T.V.G, but it is unusual for the guarantee to be formalised. There are some advantages in this informal relationship compared with the situation if the T.V.E and T.V.G were at arms-length. The T.V.E, in particular in its start-up phase, in most (if not all) cases would not have the resources to give a formal guarantee to the lender. Thus without the informal support, and political connections, of the T.V.G which provides opportunities for T.V.Es to access capital and other inputs, it is at least arguable that the T.V.E sector would not have grown at the rate which it has.

Li (1996) describes the informal relationship between T.V.Es and T.V.Gs, in circumstances like these, in terms of grey markets. A grey market is one in which transactions may be blocked due to residual government regulations. However, a government bureaucrat or a government agency can properly work

around the obstacles and make the transaction possible (Li 1996 p.3). Li (1996 p.16) suggests: "Given the greyness and imperfections of the market, a proper degree of ambiguity in property rights is perhaps necessary". Of course "transition economists" object that formal capital markets and a strong legal framework would overcome, or at least reduce, market imperfections and thus eliminate, or reduce, the need for informal backing from T.V.Gs. But in some respects, this argument is naive in the sense that, in focusing on "completing the reform", it tends to underestimate the problems in designing a workable mechanism that is faithful to the basic tenants of individual property rights.

Neither of these points claim advantages for informal institutions over formal institutions if we were in an ideal world. Moreover, neither argument provides an explanation for the performance of T.V.Es relative to S.O.Es. At a different level, though, informal institutions, in their own right, *in some circumstances*, might be more efficient (in terms of possessing growth enhancing properties) than formal institutions. Taking this a step further, the relative advantages of formal and informal institutions, in terms of different patterns of growth, might provide a basis for explaining the performance of T.V.Es relative to S.O.Es. The ideas are tentative, to the extent that comparing T.V.Es and S.O.Es, in this fashion is novel in the literature (Lo 1997 chaps. 2 and 4 is an exception and the discussion below draws readily on Lo 1997 chap.4). However, while the arguments are far from conclusive, and at times tend to be speculative, their focus is on attempting to give an explanation for T.V.E performance based on what can be observed.

Lo (1997 pp89-90) summarises several characteristics of S.O.Es and T.V.Es which are well documented in the literature. These are (a) T.V.Es are subject to a higher degree of market competition than S.O.Es; (b) the contrast between T.V.Es and S.O.Es can be characterised in terms of flexibility versus rigidity in responding to the market and (c) S.O.Es are less responsive to the market because of their institutional arrangements - in particular a soft budget constraint

and rigid wage adjustment. To this list we could add (d) T.V.Es are more responsive to the market because the widespread existence of informal institutions makes them more flexible. Lo argues that both rigid arrangements in S.O.Es, and flexible arrangements in T.V.Es, have positive and negative effects dependent on the pattern of economic growth. Hence he argues that S.O.Es outperformed T.V.Es in the boom period (1985-1988) when market demand was stable, while T.V.Es outperformed S.O.Es in the recession period (1989-1991) when there were severe market fluctuations. S.O.Es, in the latter period, without an exit option, were forced to keep operating, although weak market demand lowered revenue and rigid wage adjustment increased costs. The fact that T.V.Es are more flexible in response to the market - and in particular were able, in a lot of cases to make use of informal arrangements with workers in the labour market, mentioned above, to shut down for short periods - made them less susceptible to market fluctuations. One estimate, which Lo (1997 p.93) cites is that in 1989-1991, up to one third of T.V.Es closed down.

These ideas tentatively can be generalised, in terms of market demand, to suggest situations where informal institutions are more efficient and other situations where formal institutions are more efficient. The comparative performance of S.O.Es and T.V.Es seems consistent with the proposition that "rigid" formal institutions perform better when market demand is stable and "flexible" informal institutions perform better when market demand is more volatile. There is ample evidence, in this respect, to suggest that T.V.Es operate in an environment where there is continuous shifts in demand towards new products. T.V.Es are dominant in downstream "new (consumer durable) industries" such as T.V sets and washing machines where there has been rapid structural change. This sort of environment, where market demand is fluctuating, is consistent with the existence of economic rents for early entrants who can make rapid adjustment to changes in demand patterns. Thus the flexible nature of informal relationships, in an environment like this might have significant

advantages over more formal arrangements where the parties are locked into a series of explicit obligations irrespective of changes in patterns of demand.⁶

The processes underpinning the evolution of informal institutions

The idea that informal institutions might be preferable to formal institutions under certain conditions of market demand is consistent with the idea, in the new regionalism literature, that informal institutions possess certain *distinct* characteristics, stemming from an eclectic mix of competition and co-operation, which gives them learning properties. The notion that informal contracting serves a cognitive function is consistent with the concept of a clan - clan, here, conforms to Durkheim's (1933 p.175) conception of an organic association which resembles a kin network, but need not include blood relations - (see Ouchi 1980 p.132). The concept of the clan form has been used in the past in the socio-economic literature to describe the informal institutions in the T.V.E sector, but previous analogies are lacking in some vital respects. The view that T.V.E regional networks can be likened to clans rests on the notion that organic solidarity is the basis of the clan form (Durkheim 1933 p.365).⁷ The concept of organic solidarity contemplates a union of objectives between individuals which stems from their mutual dependence. It is the recognition of mutual dependence that alleviates the need for formal sanctions. Ouchi (1980) sums this up:

"Performance evaluation takes place instead through [a] kind of subtle reading of signals ... which cannot be translated into explicit, verifiable measures. This means that there is sufficient information in a clan to promote learning and effective production, but that information cannot withstand the scrutiny of contractual relations" (Ouchi 1980 p.137).

If informal institutions in the T.V.E sector do depict elements of clan form there are two issues that need to be considered. The first is the concept of socialisation. Most writers on the clan form (eg Barnard 1938, Ouchi 1980) stress that, where clans are prevalent, socialisation into the organisation is a

principal mechanism for mediation and control. This principle has been widely observed in the literature on the J-mode. The usual practice is for the J-mode to hire inexperienced workers and then socialise them to accept the firm's objectives as their own, but the extent to which workers in T.V.Es identify with the objectives of their enterprise is debatable. On this point the evidence is mixed. A comparative study of Chinese and Japanese workers' attitudes conducted by Japanese academics in 1987 claimed that a "laziness disease" was endemic among Chinese workers (Sengoku 1988). Shih (1995 pp.138-139) reached similar conclusions on the basis of interview evidence. His main conclusion was that "most workers ... must be prodded by material reward".⁸

However, Pei (1996) presents interview evidence which contradicts these findings and suggests a high degree of socialisation.⁹ The results from a T.V.E worker questionnaire considered in Gelb (1990 pp.289-290) support Pei (1996). For example, consistent with traditional lifetime employment practices in Japan, the results suggested that most workers were happy working for a T.V.E and expected to remain with their T.V.E for a long time. Gelb & Svejner (1990) argue that work attitudes in T.V.Es might not be that dissimilar to the J-mode. The J-mode, they speculate, "may be of great relevance to China because of the degree of community identification and low labour mobility there" (1990 p.422). There are close parallels between the *danwei* system in Chinese S.O.Es and the "workplace family" in Japan. "In both cases work colleagues are also neighbours. Work lives and after-hours lives are closely intertwined. The sense of community is reinforced by the workplace being a mini-welfare state that takes care not only of the employees welfare in work, but also their medical needs, retirement funds, ... education of their children etc" (Chan 1995 p.457).

A second issue that needs to be addressed is the source of legitimate authority. The concept of legitimate authority underpins the evolution of collective norms (Barnard 1938, Etzioni 1965). Within formal institutions (markets and hierarchies) legitimate authority is manifest in "legal" or "rational" relations, but in

informal institutions it takes on more traditional forms (Christie 1982 pp.99-113, Edgerton 1985 chap. 7). The source of legitimate authority which holds together informal institutions tends to come from other institutions which are external to the *affected* institution. Some common examples mentioned in the literature are the church and educational process (see Ouchi 1980, Malle 1994), but these are more applicable to feudal or capitalist societies, at different points in time, than post-socialist transformation. Thus what is the source of legitimate authority that underlies the evolution of informal institutions in the T.V.E sector? The problem with the existing socio-economic literature, which has treated T.V.E strategic alliances as clan like, is that this point has not been addressed. The issue of the degree of socialisation in T.V.Es, along with consideration of potential alternative mediation mechanisms, is also glossed over in Nee (1992) *et al.*

(iii) THE POLITICAL CENTRE AS A SOURCE OF LEGITIMATE AUTHORITY

The evolution of reciprocity between the T.V.E and the political centre

Figure 5.1 depicts, via an arrow, the political centre (*ie* the central government) conferring legitimate authority on the T.V.E. The relationship between the political centre and the T.V.E represents a form of strategic alliance, as an extension of the above framework. The idea of a strategic alliance between the political centre and the T.V.E - or the T.V.E sector - seems essential in explaining the latter's success, but it rests, first and foremost, on the existence of reciprocal benefits - *ie.* benefits flowing to both parties. The political centre confers legitimate authority on the T.V.E sector *because it is in its best interests to do so.* The basis of reciprocity is elucidated in Taylor (1982 pp. 28-29):

"Each individual act in a system of reciprocity is *usually* characterised by a combination of what one might call short-term altruism and long-term self interest: ... Reciprocity is made up of a series of acts each of which is short run altruistic (benefiting others at a cost to the altruist) but which together *typically* make every participant better off" (emphasis in original).

The benefits to the T.V.E sector

The first benefit to the T.V.E (and in a more general sense the T.V.E sector) is, in some respects, obvious. The decentralisation process has made regions more autonomous (Shirk 1990, Qian & Xu 1993). Fiscal decentralisation has given regional based economies relative financial independence. The concept of "eating in separate kitchens" has also freed regional governments from arbitrary appropriation by the centre, allowing them to channel funds back into the regional network. A second benefit conferred on the T.V.E is less direct. It takes the form of subtle, and in some cases not so subtle, discrimination. Nee (1992 pp. 173-174) has documented how private firms often face discrimination in obtaining credit, labour and material supplies. Young & Gang (1994) point out that the private sector is often subject to political attacks. T.V.Es, however, have easier access to all of these things. This seems to almost take the form of political protection. As Qian & Xu (1993) describe the process: "[T.V.Es] are 'politically correct', protected by at least some level of government" (1993 p.13).

The benefits to the political centre

The strategic alliance between the political centre and the T.V.E benefits the former in at least two ways. The first is that the success of the T.V.E legitimises the central government. This statement might be perceived as controversial. The evolution of the T.V.E sector has not always been viewed in this way. For example Nee & Lian (1994) adopt a position which is the complete opposite of what I am suggesting. These commentators argue that the T.V.E sector is, in effect, representative of *the political centre's declining legitimacy*, but Nee & Lian's view rests on the presumption that the T.V.E sector is just the first stage in the transition to full private property rights.¹⁰ This depicts a totalitarianist view of the state where control loss equates with loss of legitimacy. This ignores the rich possibilities that exist, in institutional structure, when post-socialist transformation is viewed as open-ended. Viewed as open-ended the

decentralisation process, at one level, legitimises the political centre, because it manifests the central government's commitment to reform. The central government does not subsidise losses or expropriate promised income in the T.V.E sector. The emphasis, instead, is on transferring discretion from the political centre to local government; a process stressed in Weingast (1993) as essential to building credible commitment (see Qian & Xu 1993 pp.32-33). At another level the T.V.E sector acts as an "engine for growth" which drives the entire economy. In this sense the success which the T.V.E sector has had legitimises the general direction the government's economic policies have taken.

The transfer of discretion from the political centre to regional government, however, does not mean that the political centre ceases to be important in the T.V.E sector. In fact, I suggest that the second benefit to the political centre, arising from its strategic alliance with the T.V.E, stems from the influence that it can exert at a grassroots level. It would be a mistake to think that just because the regional network is relatively autonomous that the influence of the political centre at a local level is any less. To make this mistake belies a long tradition in political authoritarianism. Schurmann (1964 p.416), writing more than thirty years ago, suggested that "by training a new type of leader, the cadre, the Chinese Communists were finally able to achieve what no state power in Chinese history had been able to do: to create an organisation loyal to the state which was also solidly embedded in the natural villages". The commune has now been replaced as the basic economic unit, but the political influence of the cadre-entrepreneur lingers on. In many cases, the heads of the T.V.Es are also heads of the villages or the party branch secretaries in the villages (see Croll 1994, X.Lin 1996) Hence, the T.V.E, through the cadre-entrepreneur, acts as an important avenue, at the local level, for the political centre's policies.

The notion of reciprocity becomes institutionalised

Maintaining order in decentralised communities

The political influence of the cadre-entrepreneur, at a local level, seems to go a long way to explaining the efficacy of informal institutions in the T.V.E sector. There have been different solutions put forward in the past as to how to maintain social order in the absence of explicit rules. Taylor (1982) is a prominent anarcho-liberalist example. He (1982 pp.25-33) develops the notion of "community" along the lines suggested in this chapter - *ie.* emphasising *inter alia* the importance of the threat of retaliation, withdrawal of reciprocity and the use of social sanctions. Taylor (1982) then argues that "community" provides a decentralised solution to the collective action problem of ensuring security of property rights. But, the fact is that security of property rights, insofar as it is achieved through deterrence of potential violators, is a non-excludable collective good. Most of the sanctioning literature, therefore, points out that a second order collective action problem arises. Given that sanctioning the behaviour of others is costly, the incentive is to free ride on the sanctioning efforts of others.

This is where the cadre-entrepreneur is relevant. The notion of a "political entrepreneur" is developed in detail in Popkin (1988) in the context of the political mobilisation of peasant communities in the Vietnamese revolution.¹¹ Popkin (1988 pp.16-17) defines a political entrepreneur as an innovator who solves collective action problems through changing beliefs about the value of collective goods and expectations about the behaviour of others, rather than through offering selective incentives. He shows how the Communist Party, in Vietnam, won support for its aims through having political entrepreneurs (*ie.* cadres) work on small scale collective action problems at the village level. The role of the political entrepreneur was to persuade individuals that the actions of others were dependent on their actions and, through acting as monitors, increase the amount of information in circulation about the behaviour of others. The cadre-entrepreneur, in the T.V.E sector, seems to perform a similar role.¹²

In this context, the cadre-entrepreneur might be seen as a mechanism for solving collective action problems that build up around informal institutions. The role of the cadre-entrepreneur, as a form of lubricant that assists in the flow of information within the informal sector, might be viewed as a sort of *de facto* surrogate for socialisation in the absence of more explicit means. If this sort of characterisation has any merit, then the legitimate authority (or "traditional values") which underpin soft contracting in the T.V.E sector are rooted in socialist political heritage. The mechanism which is being used to maintain decentralised social (and economic) order in the transformation period stems from, or draws on, the institutional framework in place *pre-transformation*. The broader lesson from this points to a need to recognise the (at least potential) existence of path dependent historical vestiges in post-socialist transformation.

"Implicit" versus "Explicit" safeguards

The strategic alliance between the political centre and T.V.Es is at less than arms-length. Therefore there is no explicit constitutional protection for the T.V.E's informal institutions. This is considered a flaw in the orthodox transition literature (see eg World Bank 1990) but it might, in effect, be a strength. The notion of reputation effects between hierarchical "superiors" and "inferiors" is relevant in this regard. This was the original sense in which the idea of corporate culture was developed in Kreps (1990). The notion of the "M-Form" hierarchical firm is generalised in Qian & Xu (1993) to represent the relationship between the political centre and regional governments. Thus, even though the strategic alliance between the "hierarchical superior" - the political centre - and the "hierarchical inferior" - the regional based economies - is not at arms-length, it is in the interests of both to preserve the relationship. As Kreps(1990) puts it:

"Current trading partners [can] enter into a hierarchical transaction ... with equanimity because each [can] trust the other to carry out the implicit contract in her or his own interests, to protect their reputations and safeguard future beneficial transactions" (1990 p.124 emphasis mine).

The benefits to the political centre stemming from the T.V.E sector are discussed above. The cost to the political centre in terms of damaging its reputation for commitment to economic reform rules out indiscriminate interference in the T.V.E's activities. Thus, although there are no explicit safeguards it is not in the interests of the political centre to intervene ad hoc in the T.V.E sector provided that the mechanism in place - the political entrepreneurs - function in a smooth fashion. However, when the informal mechanisms for monitoring the soft contracting process do fail such as, for example, when cadre corruption becomes intolerable, because the relationship is at less than arms-length, the political centre can take a more pro-active position. Casual empiricism suggests, in this regard, that in recent times when the political centre has threatened to haul in the reins on economic reform it has been because of concern over cadre corruption (see eg *Beijing Review* April 1-7 1996 pp.16-19).

Sometimes it is pointed out, quite rightly, that informal institutions encourage cadre corruption because they present more opportunities and make it more difficult to detect (see eg Liew 1992). This is a problem, but it is the same informal basis to the relationship between the political centre and regional governments that allows the political centre to monitor, and act on, cadre corruption. The informal nature of the relationship, together with the fact that the political centre *could* withdraw from the relationship even if it never does, serves to make clear to the regional based economies, and in particular the cadre-entrepreneurs, that it is in their best interests to preserve the strategic alliance. This is important because threats to the efficacy of informal institutions in the T.V.E sector, such as cadre corruption, in themselves, threaten to undermine the main benefits that the T.V.E sector provides - ie legitimising the political centre.

(iv) THE INTERNAL STRUCTURE OF THE TOWNSHIP AND VILLAGE ENTERPRISE

Ownership

This framework provides a basis for considering the internal structure of the T.V.E. The nominal rights to ownership, in figure 5.1, are assigned to the local residents. As mentioned above, this is consistent with the approach taken in Chang & Wang (1994). The reasons for assigning nominal ownership to the local residents, within the framework developed in this chapter, are also similar to those given in Chang & Wang (1994). Those authors suggest that nominal ownership is assigned to the local residents to manifest the political centre's commitment to regionalism (see Chang & Wang 1994 pp.446-447). The model developed above suggests that the nominal ownership rights are assigned to the local residents for much the same reason. Thus, in the absence of explicit constitutional protection for the activities of the T.V.E, the decision to give nominal ownership rights to the local residents can be seen as part of the political centre's attempt to nurture a reputation for respecting property rights in the T.V.E sector. This corresponds with the notion of corporate culture in Kreps (1990). The difference is that it is "corporate culture" at the national rather than the firm level. But the language which Kreps uses is still relevant. The decision to give nominal ownership to the local residents is part of a set of policies "which gives hierarchical inferiors an idea *ex ante* how the organisation [*ie.* the political centre] will react to circumstances as they arise" (Kreps 1990 p.126).

Control Rights

The control rights, in figure 5.1, are depicted as shifting from the T.V.G to the T.V.E manager and workers over time. The shift in control rights over time is an issue which Chang & Wang (1994) raise, but their model does not really address (see Chang & Wang 1994 p.437 footnote 10). However, when cadre-entrepreneurs are seen as vehicles to (i) influence people's beliefs about the

collective nature of informal institutions and (ii) monitor the flow of information within the regional web, a possible explanation emerges. It makes sense to give the control rights to the T.V.G in the early and intermediate periods of the transformation process for two reasons. The dual role of the T.V.G (the cadre-entrepreneurs) is relevant here. First, the reputation of the T.V.E can be readily identified with a prominent regional institution - the T.V.G. When the process of building informal institutions is first emerging it seems reasonable that the evolution of collective norms will be facilitated if the parties *external* to the T.V.E know that the reputation of the T.V.G stands behind the project. If the T.V.G has the control rights, it has the incentive to maintain its reputation in the project.

The second function of the T.V.G, suggested in this chapter, is to monitor the development of collective norms. It was suggested earlier that the T.V.G might act as a solution to the second order problem of free riding on collective sanctioning or as a *de facto* surrogate for the socialisation process. If this is the case, giving the T.V.E control rights to the T.V.G might make it easier for the political entrepreneur to monitor the flow of information about collective behaviour in the informal regional web. But why do control rights shift over time? While admittedly somewhat sketchy, and requiring empirical verification, the shift in control rights to the T.V.E manager and workers, over time, might represent a progression in the socialisation process. As the soft trading culture becomes embedded in the social environment the importance of the T.V.G in the process might diminish. At the same time casual observation suggests that T.V.G leaders themselves sometimes transform from political cadres to entrepreneurs, therefore becoming managers. An interesting empirical exercise, on this point, would be to compare worker attitudes (on issues such as the extent to which they identify with the objectives of the T.V.E) in T.V.Es where control rights rest with the T.V.G and T.V.Es where casual empiricism suggests shifting control rights. An attempt will be made to test this argument in chapter seven.

5.3. SOME PRELIMINARY COMMENTS ON T.V.Es AS PART OF A BROADER REGIONALISM

I suggest that the success of T.V.Es, viewed in a wider context, shows that informal institutional responses might be valid in both "high λ " Asia and "low λ " Europe in certain circumstances. This involves seeing informal institutions as legitimate cognitive alternatives in their own right, rather than just stages in the transition to private property rights. This sort of approach involves taking a different tack to that in Weitzman & Xu (1994). The framework is the research agenda stressing the importance of regional based economies which has spurned from Piore & Sabel (1984) (see eg Scott 1988, Sabel 1989). The success of the T.V.E sector is a specific example of the re-emergence of regional based economies. Before exploring this idea further, it is important to be clear as to what I am not suggesting. Most of the literature on regionalism, to this point, has centred on the "Third Italy" (eg Pyke *et al* 1990). I am not suggesting that the Third Italy or other specific regional variants such as Silicon Valley or Baden-Wurttemberg have been simply transposed into the T.V.E sector. While the T.V.E sector shares some similarities with aspects of European and Anglo-American regionalism, there are equally also important differences.¹³

The point is that regional based economies are dependent on their local social and historical contexts (see Courault & Romani 1992). The new regionalism concept rests on recognising and nurturing path dependent differences between regional variants. The main criticism which the new regionalism literature makes of the mass production paradigm is that the latter does not recognise the importance of regional differences (Piore & Sabel 1984 chap. 7). The same criticism, as alluded to above, can be made of the post-socialist transition approach to (post) socialist societies. The existence of regional specific path dependencies is not just an Asian or European phenomenon. The regional specific character of the T.V.E is stressed in this chapter and elsewhere (eg

Qian & Xu 1993, Goodhart & Xu 1995). The significance of historical and institutional variations in Eastern Europe has been emphasised in a number of articles (see eg Carroll *et al* 1988 and Van Ees & Garretsen 1994). Having stressed the existence of region specific differences, there are some general characteristics which define regional based economies. These provide the basis for a different approach that sees informal institutions as legitimate discrete cognitive alternatives to both markets and hierarchies. The main similarities are:

(i) *The existence of informal institutions:* The significance of informal arrangements to the T.V.E is discussed above. The importance of implicit conventions in the "Third Italy" and in French regional variants, which rule out wage competition and labour poaching are discussed, *inter alia*, in Courault & Romani (1992) and Lorenz (1992). The role of implicit contracts in the J-mode is discussed in Aoki (1990) - see also chapter six. Another example is the informal exchange of information common in high-tech American regionalism - in particular in Silicon Valley and Route 128 (see Saxenian 1992, Tyson 1992).

(ii) *A balance between co-operation and competition:* This seems to be the main ingredient in the success of regional based economies (see eg Dei Ottati 1994, Friedman 1988 chap. 5, Sabel 1989 pp.45-52). "On the one hand, competition between supplier firms produces a higher degree of specialisation and a more extensive division of labour; ... on the other, cooperation between buyers and sellers enables them to pool risks and draw on each other's distinctive capabilities in the form of specific skills, information and tacit knowledge of processes and techniques" (Arrighetti *et al* 1997 p.172). As far as specific examples go, the peculiar mix of cooperation among T.V.Es and competition between T.V.Es and S.O.Es is discussed in Qian & Xu (1993 pp.13-14) and Jefferson *et al* (1994). The importance of bilateral trust relations in a

range of location specific regional economies are discussed in Gambetta *et al* (1988) (eg on trust and co-operation in the Lyon metal working industry see Lorenz 1988). Best (1990 chap.5) emphasises the balance between cooperation and competition in the J-mode - a non location specific example.

(iii) *The existence of a distinct grouping*: The term regionalism implies something which is location specific. And this is how the concept has been interpreted in most of the literature (see eg Courault & Romani (1992). However, in attempts to generalise flexible specialisation into a general paradigm (see eg Piore & Sabel 1984) the notion that regionalism must be location specific is dismissed. While attempts to generalise regionalism in this manner are controversial it can be useful to think of a "distinct grouping" as the point of reference rather than a region which is location specific. The reputation effect mechanism, discussed above, seems to rest on the existence of a relatively self-contained group rather than a location specific region. The *keiretsu*, in Japan, for example, does not fit easily into a location specific explanation,¹⁴ but the notion of "groupness" (Ouchi 1981) is readily akin to the broader term. The concept of a "distinct grouping" is, nevertheless, often an out growth of location specific regionalism. And the term "distinct grouping" captures a region in local space, such as T.V.Es, as a subset.

(iv) *The importance of the social setting*: Where regionalism is location specific it is often based on, or has evolved out of, personal and familial ties. The importance of the social setting illustrates the recurring theme, in this chapter, that economic relations are embedded in a broader cultural context. This point has been emphasised, in the T.V.E case, in Nee (1992) and Lin (1995). The role which familial and broader social ties have played as the basis of the "Third Italy" are well documented (see Courault & Romani 1992 pp.206-207). The importance of small family firms in French regionalism has also been acknowledged (see Ganne 1992). The reputation mechanism, above, depends,

for its effect, on regionalism having a strong element of social embeddedness.

5.4 CONCLUSION

This chapter has put forward two main arguments. The first was that traditional T.V.Es can be seen in the context of a regional web. The second was that the T.V.E experience is a specific example of a broader new regionalism. The literature which has grown out of attempts to explain T.V.E success, to this point, has not challenged the post-socialist transition approach as it applies to Eastern Europe. For example, Weitzman & Xu's (1994) paper explains T.V.E success on the basis of differences in co-operative culture between Europe and Asia, rather than posing a direct challenge to post-socialist transition. Qian & Xu (1993), in a similar fashion focus on the differences between China and Eastern Europe to explain the former's success - contrasting the "M-Form" planning structure with the "U-Form" hierarchical planning structure. However, if T.V.Es are part of a broader new regionalism this suggests an alternative view of transition in Eastern Europe. In concluding the chapter I want to elaborate on this point.

The problem of cooperation in institution design can be traced back at least as far as Chester Barnard (1938). He stressed that the problem of cooperation stems from the fact that the objectives of individuals often do not coincide. The Barnard tradition, therefore, suggests that the main aim in designing institutions is to find a method of controlling diverse individuals in an efficient fashion (see Ouchi 1980 pp.130-131). This criteria implies that the appropriate institutional design, on the face of it, at least in the absence of empirical evidence, should be open-ended. This means that both formal and informal institutional responses should be considered potential discrete cognitive alternatives. The issue of institutional design, however, following Williamson (1975), has tended to be interpreted in terms of either a market/hierarchies distinction or a market/hierarchies continuum. The problem is that the market/hierarchies distinction sees institutional design in black and white either/or terms positing

markets and hierarchies as formal alternatives. The continuum perspective, on the other hand, provides for informal institutional responses, but as just a spectrum in a market/hierarchies continuum. Thus the extent to which informal institutions, in Williamson, are distinct cognitive alternatives is not apparent.

These ideas have been transferred over into the literature on post-socialist transition, which dominates the debate on Eastern Europe, as accepted doctrine. The post-socialist transition literature treats hierarchies and markets as *the* institutional alternatives. To do this, command economies are conceptualised as large hierarchies - "central planning is but the extreme point on the continuum of possible scales of hierarchy" (Putterman 1995 p.374). The implication of this sort of dichotomising is that the transition from state planning to market involves the straight switch of one institutional design for another. Little attention has been given to the notion that there might be discrete informal alternatives to both the market and central planning. The problem is that the big bang approach treats markets as the institutional answer to differing individual goals and thus tends to overlook the importance of path dependent historical heritage in Eastern Europe (see eg Stark 1990 1991 and Van Ees & Garretsen 1994).¹⁵ The notion that markets, as institutions, have an historical dimension is also overlooked in the big bang tradition. The big bang view of the market as ahistorical and a path dependent follows, in essence, from the Williamson thesis that the firm as an individual is underpinned via a nexus of contracts (see eg Williamson 1985, 1990). The reason is that Williamson's emphasis on methodological individualism in extending market contracting into the firm denies the potential relevance of collective action in the market and, in this sense, it becomes a mere abstract space of exchange where agents, in an ideal world negotiate outcomes which are allocative efficient. However, the fact is the emphasis on individualism is antithetical to the cognitive nature of the institution.

The existence of a "U-Form" hierarchical planning structure (Qian & Xu 1993 pp.16-18) in Eastern Europe means that, in some cases, regionalism will be problematical.¹⁶ But to dismiss the potential wider application of regionalism because there was a more centralised planning structure in Eastern Europe misses the main idea. The point is that regionalism is a gradual evolving process. The implication is that there is no *single*, to borrow Murrell's (1995) title, "transition according to Cambridge Mass.". The transformation process, instead, is often path dependent group (and region) specific. And the existence of *inter alia* ethnic diversity and cultural heritage in Eastern Europe makes this as relevant there as it is in Asia. This is not to suggest that clan forms will be the inevitable end result of post-socialist transformation. Perhaps, over time, even the T.V.E sector will come to resemble standard western property ideals. What it does mean, though, is that transforming economies should be allowed to develop institutional responses which are best suited to their own needs.

CHAPTER 6
THE TRADE-OFFS BETWEEN COLLECTIVE LEARNING AND
SPECIALISATION IN THE T.V.E SECTOR

6.1. INTRODUCTION

The last chapter presented a regional based model of the "traditional" T.V.E.¹ The informal character of the traditional and still dominant T.V.E regional network has been an important factor in explaining its success. However, there are a growing number of larger T.V.Es which enter into inter-regional and even international contracts.² The behaviour of these T.V.Es often does not fit well with a pure regional based explanation which focuses mainly on informal institutions. This chapter suggests that the growth of the T.V.E sector has resulted in important related trade-offs between informal and formal exchange and between collective learning and specialisation. With the growth in the T.V.E sector, regional based explanations need to be extended in order to explain these developments. The last chapter mentioned that the model developed there could be extended to explain inter-regional and international T.V.Es through drawing analogies with the Japanese experience. This chapter develops this idea in the context of a formal model. To do this, the notion from chapter three, that different concepts of the division of labour underpin the market-hierarchies and collective learning rationales for the firm, will be used.

The chapter has two inter-related aims. The first is to point to, and formalise, some of the relevant trade-offs that have emerged with the growth of T.V.Es using a model adapted from Ehrlich (1973). The second is to suggest that the T.V.E sector is developing a dual character. This entails (i) a core of strategic alliances based on informal exchange similar to the *kigyo shudan* (or business

grouping) in Japan and (ii) an extended sector in which arms-length or formal exchange is predominant. The chapter is set out as follows: The basic ideas are presented in an informal manner in section 6.2. The object of this section is to summarise some of the main arguments made in the last chapter with a view to extending the framework in the formal model. There is a brief discussion of the notion that T.V.Es are part of a distinct grouping. This is followed with a discussion about the dual nature of an expanded T.V.E sector and the trade-offs that this involves. These concepts are formalised in section 6.3 where a simple model which looks at the trade-offs between informal and formal exchange in the expanded dualistic T.V.E sector is presented. The implications of the model for future directions in the T.V.E sector are explored in section 6.4. The last section contains some general observations on the chapter.

6.2 THE TOWNSHIP AND VILLAGE ENTERPRISE SECTOR

The T.V.E Sector as a Regional Network or Distinct Grouping

The last chapter pointed out that the notion that traditional T.V.Es operate within a relatively self contained regional network is consistent with a low level tier in Qian & Xu's (1993) "M-Form". Nevertheless, it also suggested that, for some purposes, it is more useful to think of a "distinct grouping" as the point of reference rather than a region which is location specific (see section 5.3). The importance of long-term reputation as a mechanism underpinning soft contracting seems to rest on the existence of a relatively self-contained group rather than a location specific region *per se*. The notion of a distinct grouping enables us to make some comparisons between the growth mechanism and external contracting of the T.V.E and the J-mode. This is consistent with a growing number of articles in Chinese journals advocating the introduction of either Japanese management practices or J-mode features in Chinese firms.³

Important differences exist in both the ownership structure of the J-mode and T.V.Es and the organisation of their distinct groupings (see Komiya 1987, Lee

1991 chap. 8, Chang & Wang 1994 pp.441-442). First, the nominal owners of the J-mode are the shareholders who have well-defined rights spelt out in the Articles of Association, but the nominal owners of the T.V.E - the local residents - do not have shares which can be bought and sold. Second, a *kigyo shudan* includes firms in both upstream and downstream industries, but this is not usually the case with groups of T.V.Es. Third, the existence of extensive cross-shareholding is a characteristic of the *kigyo shudan* which has no counterpart in the case of T.V.Es. A fourth related difference is that the *kigyo shudan* affiliations revolve around the main bank system. Thus, for most listed companies in Japan, the main bank is among the major shareholders of member firms or more typically it is representative of their interests. As such it has the closest informal ties with individual firms in terms of cash management and loans (see section 3.2). There is no direct counterpart to the main bank system underpinning informal links between T.V.Es, but the T.V.G's role is similar.⁴

Yet, in spite of these differences, there are similarities in the growth mechanism of the J-mode and T.V.Es. An important J-mode feature is that the major stakeholders - external financing entities, shareholders and workers - make a long-term commitment to the firm. Aoki (1990) argues that this promotes productive efficiency because it cushions the firm from the full rigour of financial and labour markets. To put it in different terms, the planning time horizon of the external financial entities, in general, tends to be longer in the stylised J-mode than in the A-mode. This is conducive to collective learning or continuous incremental technical change in productivity growth. Lo (1997) points out that there are similarities in the institutional structure of S.O.Es and the J-mode in terms of promoting incremental innovation: Hence, he suggests (at pp.91-92) "the rigidities characteristic of China's reformed enterprises, particularly in terms of low labour mobility and close government-enterprise ties, though detrimental to allocative efficiency, might have been conducive for productive efficiency".

This statement is also applicable to T.V.Es. First, while traditional T.V.Es are flexible in the labour and product markets, the close relationship between T.V.Es and T.V.Gs means that lenders are more willing to make long-term commitments in the financial market. For example, Ho (1994 p.125) points out that, in Jiangsu, if a T.V.E is unable to service its loan, the common practice is for the T.V.G to transfer the debt to another, or to several other enterprises under its control. While allocative inefficient, long-term commitment fosters productive efficiency through providing a cushion for incremental innovation and learning through networks. The late industrialisation literature suggests that this is the basis for the successful adoption, adaptation and improvement of imported technologies and hence economic growth (see eg Amsden 1989, Best 1990, Lazonick 1991, Lo 1997). The Japanese have adopted, adapted and improved on existing imported technologies since the Meiji period. Between 1868 and 1912 the development of so-called Meiji technologies, from existing methods, which were better suited to local climatic conditions than their imported western counterparts, was an important reason for growth (see Rosovsky 1972) After World War 2, consistent with Abramovitz's (1989) catch-up hypothesis, the Japanese imported technologies from countries like the the United Kingdom and United States, often making improvements through incremental innovation. Since the introduction of the economic reforms China has followed a similar path, through encouraging foreign investment in allocated areas. Imported technologies and associated rapid structural change have been a prominent characteristic of Chinese growth in the reform period (see Lo 1997 chap.3). While collective learning associated with this growth pattern is not restricted to T.V.Es, it has been conducive to integrated coordination through networks.

A second feature common to the J-mode and T.V.Es is that there is no pressure from shareholders for dividends. In the Japanese case shareholders are treated as a group outside the firm like banks. This means that in the stylised J-mode, emphasis is placed on growth rather than short-term profit. Similarly, once the

T.V.G has met its obligations in terms of its social welfare function, it is able to retain most of the after-tax profits inside the T.V.E to finance further growth. One estimate which Ho (1994 p.123) gives is that in the sunan region in Jiangsu, in the first half of the 1980s, most T.V.Es reinvested 50% to 60% or more of retained profits. The results of a joint SSB and People's University study of 200 rural enterprises in 10 provinces suggests that this is a conservative estimate. The firms in the sample, most of which were T.V.Es, reinvested between 79% and 93% of retained earnings in 1985 (Zhou & Hu 1987 p.142). This is similar to the capital-centred system in Japan where most of the capital is reserved inside the firm to finance further expansion. A well-known fact is that compared with firms in other advanced capitalist countries, the dividend to profit ratio in Japanese firms is much lower (see eg Odagiri 1994, Zhao 1997 pp.17-18).

Third, both the J-mode and T.V.Es exhibit a high ratio of debts. There are obvious potential costs in having a high debt ratio. Attempts to reduce high levels of debt among T.V.Es has been one of the major reasons behind the push for more joint-stock companies.⁵ Similarly, concerns about bad debts in light of lower growth rates in recent years has underpinned calls for reforming the Japanese financial system.⁶ However, high levels of debt have also been consistent with high growth rates. Without a high level of borrowings, given the relative scarcity of funds, it is unlikely that T.V.Es would have grown at such a rapid rate. The same is true of Japan. For example in the period of substantial growth, between 1956 and 1970, 300 billion yen, the cumulative deficiency of total enterprise accounts, was made up in entirety by the surplus funds of residents' accounts through "deposits → bank loans" (Zhou & Hu 1987 p.122).

There are also substantial similarities in the informal character of the J-mode and T.V.Es' external contracts. These revolve around the informal nature of contracting in both distinct groupings. The *kigyo shudan* affiliations, like T.V.Es, often operate at less than arms-length. Most loans are negotiated at a personal

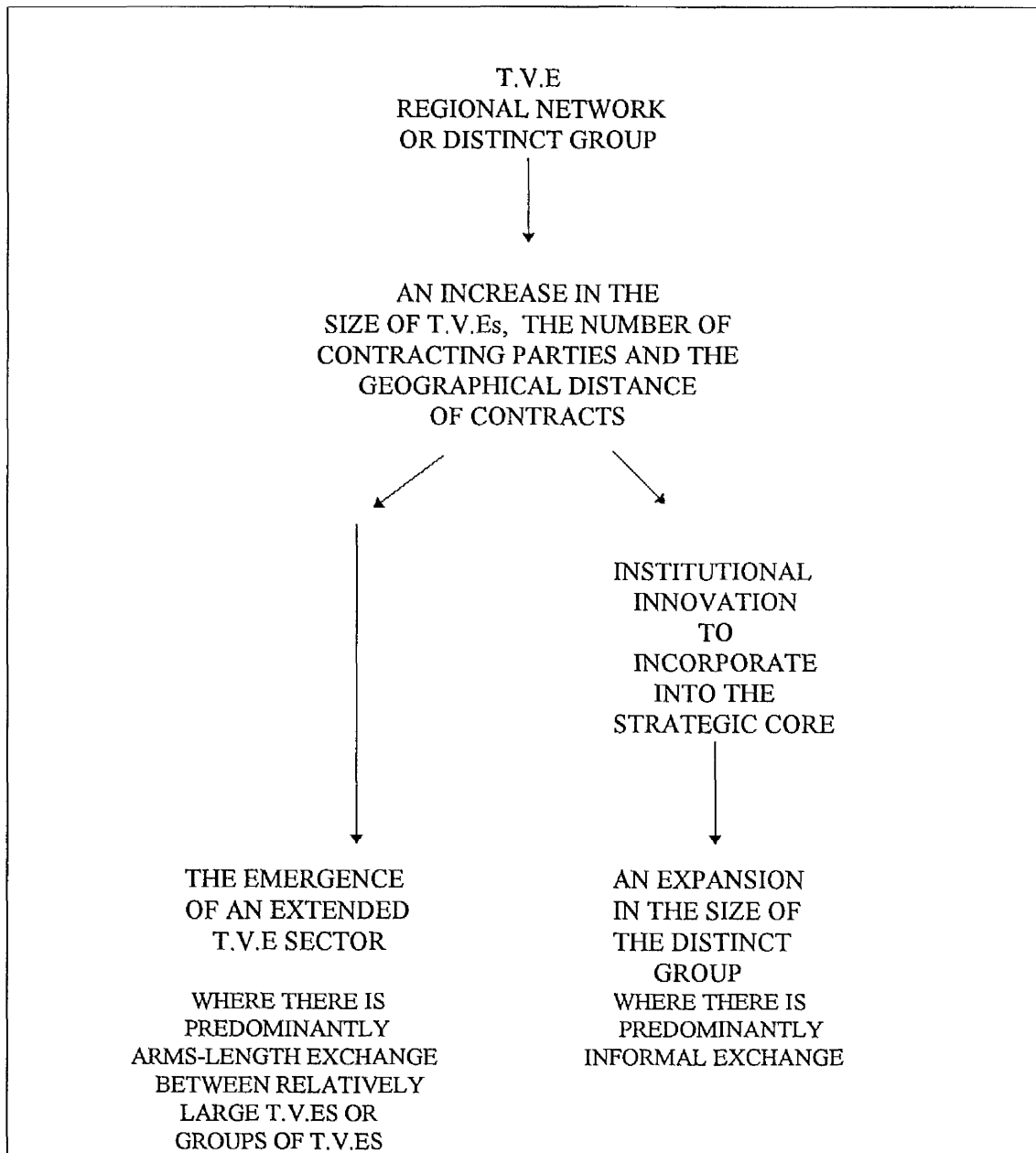
level where informal ties created, in part through cross-shareholding, are more important than explicit contracts. The close ties between member firms is also reflected in the fact that the policies which member firms of the *kigyo shudan* adopt tend to mirror the interests of the group as a whole, rather than the interests of individual shareholders. Member firms of the *kigyo shudan*, much like T.V.Es, also help one another in times of serious business hardship. These informal contracts within both distinct groups represent strategic alliances in the absence of formal sanctioning. Gerlach (1992) has used the term "intercorporate alliance" to describe contracts in the *kigyo shudan*. The language which Gerlach (1992) uses is also apt for describing alliances in the T.V.E regional network:

"Intercorporate alliances ... are *institutionalised relationships among firms based on localised networks of dense transactions, a stable framework for exchange, and patterns of periodic collective action*. ... The organisational model is neither that of Alfred Chandler's 'visible hand' or Adam Smith's 'invisible hand' ... but of hands interlocked in complex networks of formal and informal interfirm relationships" (1992 p.3 emphasis is in the original).

The composition of the T.V.E regional network is not as homogeneous or organised as the *kigyo shudan*. Gerlach (1992 p.24) points out that the *kigyo shudan*, in Japan, have tended to follow similar patterns of membership. Each business grouping includes: (i) a major commercial bank at its centre (the main bank), (ii) a large life insurance firm, (iii) one or more general trading companies and (iv) one or more manufacturing firms in all important industrial sectors. The same general format for executive interaction between members is also followed through "presidents' councils" which meet each month. There are no formal arrangements like this in the T.V.E regional network. The result is that there is generally not the same degree of semi-formalised corporate feeling in the T.V.E case. However, while the T.V.E regional network is not as developed as the *kigyo shudan* there are indicators that it is moving in the same direction.

FIGURE 6.1

THE IMPLICATIONS OF THE GROWTH OF THE T.V.E SECTOR FOR THE EXTENSION OF
THE DISTINCT GROUP AND EMERGENCE OF AN EXTENDED SECTOR



The Dualistic Character of the Expanded T.V.E Sector

The regional and emerging extended T.V.E sector

There are signs that the growth of the T.V.E sector in terms of three factors is creating a dualistic character similar to the J-mode. The three factors are (i) an increase in the size of T.V.Es, (ii) an increase in the number of contracting parties and (iii) an increase in the breadth of contracting in terms of geographical distance. The dual structure consists of a distinct group where T.V.Es continue to operate predominantly at less than arms-length and an extended sector where there is mainly arms-length exchange between large T.V.Es or groups of T.V.Es. The main argument is sketched out in schematic form in figure 6.1. It posits that the growth in the T.V.E sector is associated with two main developments: institutional innovation and the emergence of an extended sector. The first is institutional innovation within the regional network to incorporate other parties into the core. In this sense, the regional network seems to be evolving from being a mainly geographic specific phenomenon to a non-location specific distinct group which is more in line with the J-mode.

The expansion of the distinct group is evident in the development of a number of relatively long-term alliances between regional or international investors. For example, Mitchell (1995) documents business groupings embracing T.V.Es, Hong Kong and Canadian companies which are based on (or have grown out of) familial ties, business trust and flexible credit. In addition a number of T.V.E groups based in China, but oriented towards the international market have emerged. It was reported in 1994 that 100 such T.V.E groups had been established nation-wide.⁷ Two years later, in 1996, there were 390 provincial level T.V.E groups in Jiangsu alone and 736 nationwide.⁸ In some cases these groups are highly organised. For example, at the end of 1991 groups of T.V.Es in Jiangsu had a range of enterprises in developing countries such as Thailand, the Philippines and Indonesia as well as developed countries such as Australia, the U.S.A, Canada and Japan with investments totalling \$US 5 million.⁹

After investing in and setting up joint ventures in developing countries T.V.E groups often set up factories there, making use of local labour, and raw and semi-finished materials, while using the services of local firms for selling the finished product (Li 1995 p.378). For example, the Changshu Polypropylene Fibre Factory run by Yushan Town in Changshu joined the Chemical Research Institute of the Chinese Academy of Sciences and the Hanging Chemical Fibre Factory in Zhejiang Province. They pooled funds with two Thai companies to set up the Site (group) Co. Ltd. in Thailand which started operations in May 1990. It had produced 5 million metric tons of polypropylene fibre and was making profits by the end of the first year.¹⁰ The emergence of groups of high-tech enterprises provides another illustration of how the strategic core is expanding. A well known example is Zhongguancun in Beijing - China's Silicon Valley. Often individual financiers, research institutions, S.O.Es and T.V.Es from different parts of China pool funds to set these enterprises up (see Zhai 1997 pp.16-17).¹¹ While, unlike the *kigyo shudan*, these groups of S.O.Es and T.V.Es do not contain firms in upstream and downstream industries, a division of labour exists in terms of transfers of funds, labour and technologies between group members.

The second development associated with the growth of the T.V.E sector is the emergence of an extended sector outside of the strategic core where there is mainly arms-length exchange between relatively large T.V.Es or groups of T.V.Es. As pointed out in the last chapter, informal contracts within a regional network or distinct group depend on reputation and trust built up between contracting parties. Hence, the success of informal contracts within the regional network depends on the communal character of the T.V.E. The close ties between the T.V.E and the T.V.G give the traditional T.V.E strong communal properties. When T.V.Es become larger and their contracting extends outside of the immediate region, all things being equal, the trust embedded in geographic specific communal contracting is absent. This situation is common in the coastal provinces where T.V.Es are larger and more marketised. The Shanghai Heqing

Embroidery and Garment Factory which was founded in 1979 in Heqing township east of central Shanghai illustrates this trend. It started as a small communal T.V.E with a few workers, but it now has 2800 workers. It has sales of \$US 12.5 million a year and recently opened a sales office in San Francisco.¹²

While it is not on the same scale as the J-mode, the emergence of an extended sector is reflected in the increase in the number of large and medium-sized T.V.Es, in particular in the coastal and urban areas. In 1996 4531 T.V.Es were classified as either large or medium sized enterprises (L.M.Es).¹³ In 1997 in Jiangsu 1209 T.V.Es were L.M.Es.¹⁴ Large T.V.Es only account for a small number of both total T.V.Es and total L.M.Es in terms of numbers. In 1995 7.4% of L.M.Es were T.V.Es¹⁵ and in 1996 the largest 5000 T.V.Es accounted for just .02% of total T.V.Es.¹⁶ However, this understates their significance in the T.V.E sector. In 1996 the largest 5000 T.V.Es accounted for 11% of fixed assets, 6.5% of sales revenue, 8.1% of pre-tax profits and 13.2% of export revenue of all T.V.Es.¹⁷ The extended sector will also become more important as the number of large and medium-sized T.V.Es grow over the next few years. It is estimated that in 2000 the number of "big township enterprises" will be 10,000. The fixed assets, sales volumes and taxes of these 10,000 "big township enterprises" is expected to account for more than 10% of the figures for total T.V.Es. Moreover, in 2000 the 200 biggest township enterprises are expected to each register in excess of one billion yuan in annual sales.¹⁸ Because of the extent of their business interests, many of these large T.V.Es enter into a range of inter-regional and international transactions most of which are at arms-length.

Trade-offs between specialisation and collective learning

The last chapter discussed Williamson & Ouchi's (1981) distinction between soft and hard contracting. The term "soft contracting" refers to exchange which is at less than arms-length. The term "hard contracting" refers to arms-length transactions where written contracts define the relationship. The distinction between soft and hard contracting implies some important trade-offs between

exchange in the distinct group and extended T.V.E sector. In this section it is argued that there are two related sets of trade-offs. First, a trade-off exists between collective learning and specialisation and this is premised on a second trade-off between informal and formal exchange. Some explanation is needed about what these trade-offs involve and how they are related to each other.

Within the distinct group, opportunities exist for collective learning through horizontal coordination. Here the term horizontal coordination refers to horizontal exchanges or horizontal information flows between T.V.Es in the distinct group. The exchange of information through horizontal coordination within the group promotes learning, but the exchange is often informal and the information flows too subtle to be documented in formal contracts. Aoki (1990) makes a similar point in emphasising the importance of collective learning within the *kigyo shudan*. He states (at p.10) that "in the Japanese case, knowledge sharing and horizontal co-ordination based on it are often informal and based on verbal communications (even tacit understanding) ... undocumented communications generate information value by the finer use of on-site information that is too subtle or cumbersome to document usefully". These observations suggest that because not all information can be written down, informal exchange generates opportunities for collective learning over and above those that would be available if all exchange is at arms-length. There are two reasons for this. Informal exchange is more flexible and it is more conducive to productive efficiency because it promotes collective learning via networks.

The extended sector provides opportunities for specialisation through vertical coordination. Here the term vertical coordination refers to the relationship between management and workers in hierarchies. The central feature of vertical coordination is the emphasis on maximising allocative efficiency through job specialisation and rational hierarchical control. Two characteristics of the extended sector promote specialisation. The first is the relative size of T.V.Es in the extended sector. The T.V.Es are larger so opportunities exist to maximise

scale economies. The second is that most information flows are formal - command constraints exist within hierarchies and most inter-firm transactions are at arms-length. This releases labour allocated to collective learning through informal exchange such as time and effort devoted to gathering and processing information. This labour can be reallocated to specialised production in the firm.

A trade-off arises because informal exchange provides more opportunities for collective learning, but it also entails costs. These costs are time allocated to bargaining and coordination in the absence of deterministic sanctions and time devoted to collecting and processing information. These activities take up time which could otherwise be allocated to specialisation in the firm. However formal exchange also entails costs. In searching for economies of specialisation and greater allocative efficiency the benefits of less than arms-length exchange in terms of promoting collective learning and productive efficiency are sacrificed. Arms-length exchange reduces coordination costs, but it also reduces flexibility which underpins collective learning in networks. An issue that arises is under what circumstances will informal and formal exchange be most appropriate? The degree of trust between the parties is central. Within the distinct group collective learning is facilitated because trust exists between the parties dependent on social or business ties. This is missing in the extended sector. As a result there is more rigid exchange, but more opportunities for specialisation.

Trade-offs between different concepts of the division of labour

In chapter three it was suggested that the concepts of soft and hard contracting are associated with different trajectories dependent on different forms of market competition. The basis of horizontal coordination between members of a distinct group, through networks, is the social division of labour. This notion was used to argue that the social division of labour underpins collective learning through informal exchange. On the other hand, the relative importance of vertical coordination in the extended sector is consistent with the detailed division of labour. The hierarchical relationship of capital and labour in the firm promotes a

more stable planning environment where market competition, due to greater concentrations of market power, is more static. In this respect most of the larger T.V.Es have lost their advantages in terms of flexibility. In fact there is little or no difference between the internal and external organisation of most of the larger coastal T.V.Es and S.O.Es. As a result the larger T.V.Es in the coastal provinces, such as Jiangsu, are often referred to as a second S.O.E sector.

A fact that supports this observation is that the growth rate is lower in larger hierarchical T.V.Es. For example Xu (1995 chap.2) found that where there is the greatest concentration of large T.V.Es - in the suburban provinces - T.F.P is growing at a slower rate than in other regions. However, he also found that actual T.F.P levels in suburban T.V.Es were much higher than in other regions. If this characterisation is correct, it suggests that the related trade-offs between informal and formal exchange and between collective learning and specialisation in moving from the distinct group to the extended sector depend on trade-offs between different growth paths or different concepts of the division of labour.

6.3 A FORMAL MODEL

The comparison of collective learning, specialisation, informal and formal exchange in the model is purely analytical in terms of exploring the characteristics of hierarchies and networks. However, while it entails a high degree of abstraction, I also hope to provide a conceptual framework for explaining different organisational characteristics of T.V.Es. In particular the model attempts to formalise the main arguments in this chapter through exploring three related issues: The first is a trade-off between collective learning and specialisation depending on whether exchange is informal or formal. The second is a trade-off between collective learning and specialisation in the distinct group and extended sector. The third is to consider the effect of an exogenous increase in the size of the T.V.E sector on the first of the trade-offs.

First, consider the trade-off between collective learning and specialisation depending on the extent to which exchange is informal or formal. To do this let us assume that a T.V.E allocates labour to three activities. The first is specialisation, the second is collective learning and the third is building its reputation or discovering the reputation of other firms. Moreover assume the following: (a) the T.V.E must choose its optimal participation in each process at the start of the period (this is a one period model), (b) the firm can substitute between processes without cost (this means that factors such as the initial cost of training labour in different processes is overlooked), (c) the returns to each process depend on, and are increasing functions of, the amount of labour assigned to them, and (d) the T.V.E seeks to maximise a given utility function:

$$U = \sum_{c=d,i}^n \prod u(X_c, t_r) \quad (1)$$

where U is satisfaction, X_c is a composite which denotes two "states of outcome" or "two states of the world" - (i) when contracts are formal (x_d) and (ii) when contracts are informal (x_i). \prod denotes the probability of state c . Let x_d occur with probability \prod and x_i occur with probability $(1-\prod)$ where $0 \leq \prod \leq 1$. \prod refers to the probability that contractual rights are certain and t_r denotes the net benefits of devoting time to nurturing reputation or discovering others' reputation where:

$$\begin{aligned} x_d &= (B_s - C_s)^{NU}(l_s) + (B_s - C_s)^U(l_s) + (B_c - C_c)^{NU}(l_c) \\ x_d &= S^{NU}(l_s) + S^U(l_s) + C^{NU}(l_c) \quad (2) \end{aligned}$$

$$\begin{aligned} x_i &= (B_c - C_c)^{NU}(l_c) + (B_c - C_c)^U(l_c) + (B_s - C_s)^{NU}(l_s) \\ x_i &= C^{NU}(l_c) + C^U(l_c) + S^{NU}(l_s) \quad (3) \end{aligned}$$

$$\text{and } t_r = f(l_r) \text{ where } l_r \rightarrow 0 \text{ as } \prod \rightarrow 1 \quad (4)$$

$$\text{subject to: } L = l_r + l_c + l_s \quad (5) \text{ (endowment constraint)}$$

$$\text{and } l_r \geq 0, l_c \geq 0, l_s \geq 0 \quad (6) \text{ (non-negativity requirements)}$$

where: l_r is labour allocated to nurturing or discovering reputation,

l_c is labour allocated to collective learning,
 l_s is labour allocated to specialisation,
 B_s and C_s are the benefits and costs of specialisation,
 and B_c and C_c are the benefits and costs of collective learning

The relationships in (2) and (3) endeavour to formalise a trade-off between specialisation and collective learning, dependent on the value of Π (the extent to which contractual rights are certain). There are other formal models which attempt a similar trade-off in the context of the J-mode (see eg Aoki 1984, 1986, 1989, Itoh 1987) and the ideas here borrow from those models. The underpinning premise in equations (2) and (3), consistent with Aoki's and Itoh's writings, is that (a) formal exchange reaps economies of specialisation, but at the expense of collective learning, while (b) informal exchange results in economies of collective learning, but at the expense of greater specialisation.

The net benefits from specialisation

$S^{NU}=(B_s - C_s)^{NU}$ and $S^U=(B_s - C_s)^U$ represent the net benefits from specialisation.

$S^{NU}=(B_s - C_s)^{NU}$ denotes the net benefits and costs associated with specialisation that exists with both formal contracting (x_d) and informal contracting (x_i). The rationale is that even when all exchange is informal, specialisation exists. Yang & Wills (1990) give a formal proof that specialisation within the firm and exchange occur simultaneously whether exchange is formal or informal.¹⁹

$S^U=(B_s - C_s)^U$ represents economies of specialisation due to formal exchange. This depicts the net benefits associated with specialisation (over and above the general benefits) as exchange becomes more formal. The benefits arise because as the amount of arms-length exchange increases, labour is released from gathering and processing information through informal channels. This can be reallocated to specialised production in the firm. The costs denote the net benefits of collective learning from informal exchange which are foregone.

The net benefits from collective learning:

$C^U=(B_c - C_c)^U$ and $C^{NU}=(B_c - C_c)^{NU}$ are the net benefits from collective learning.

$C^{NU}=(B_c - C_c)^{NU}$ denotes the net benefits and costs associated with collective learning that exists with both formal contracting (x_d) and informal contracting (x_i). Even when exchange is formal, some opportunities exist for collective learning within the firm and to some extent between firms through information exchange.

$C^U=(B_c - C_c)^U$ represents net benefits to collective learning specific to informal exchange. The benefits (B_c^U) include inter-firm learning due to more flexible exchange which generate innovations which are in excess of value creation when exchange is at arms-length. The costs (C_c^U) relate to the extra time and effort that need to be diverted from specialised processes to facilitate inter-firm integration and value creation. These include the extra costs of bargaining, as well as coordination and communication in the absence of formal exchange.

The condition in (4) suggests that as exchange becomes more formal, labour devoted to "reputation issues" decreases. The T.V.E devotes labour time to nurturing its own reputation and discerning the reputation of potential contractees. When exchange is informal (ie. low Π) nurturing and discerning reputation will be important *ex ante* when deciding whether to contract because of the absence of explicit sanctions. As exchange becomes more formal, reputation will be less of an issue. Having said this, I am not suggesting that the polar extreme ($\Pi=1$) exists. The existence of court/arbitration costs means that even in high Π societies such as Western Europe some contracts will be negotiated on reputation (see eg Macauley 1963, Williamson 1975 pp.103-108).

If we substitute (2) and (3) into (1) the problem is now to maximise:

$$U(x_c, t_r) = \Pi u(x_d, t_r) + (1-\Pi) u(x_i, t_r) \quad (7)$$

subject to (5) with respect to the choice variables l_r , l_c and l_s

Thus, taking the first derivative, the Kuhn-Tucker conditions are as follows:

$$\begin{aligned} \partial U / \partial l &\leq \lambda \\ (\partial U / \partial l) \cdot l &\leq \lambda \quad (8) \\ l &\geq 0 \end{aligned}$$

where l denotes the optimal values for l_r , l_c , l_s and λ (the Lagrangean multiplier) denotes the marginal utility of labour or marginal utility of the firm's time ($\partial U / \partial L$).

We are interested in how the firm allocates labour between collective learning and specialisation as the degree to which contractual rights are certain varies. If we assume that labour allocated to reputational issues (l_r) is given (for a given Π), the optimal allocation of labour between specialisation and collective learning, in the case of an interior solution, must meet the first order condition:

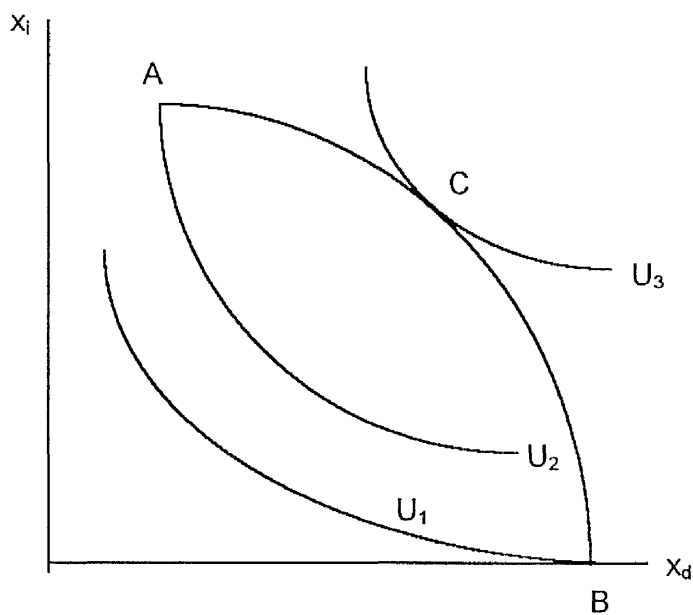
$$\begin{aligned} -\{ (c^U + c^{NU}) - s^{NU} / c^{NU} - (s^{NU} + s^U) \} &= \Pi U'(x_d) / (1 - \Pi) U'(x_i) \quad (9) \\ \text{where: } c^U &= dC^U / dl_c, \quad c^{NU} = dC^{NU} / dl_c, \quad s^{NU} = dS^{NU} / dl_s, \quad \text{and } s^U = dS^U / dl_s \end{aligned}$$

The term on the left hand side of (9) is the slope of a production transformation curve (PTC) of the composite variable x_c between the two states of the world (x_d and x_i). The term, on the right hand side of (9) is the slope of an indifference curve (defined along $dU^*=0$). The PTC, in figure 6.2, is defined between the points A and B because of the conditions in (4) and (5). The vertical and horizontal intercepts, drawing diagonals from A, are $(C^{NU} + C^U) / (l_c) + S^{NU} / (l_s)$ where $l_s + l_c = L - l_r$, and $l_r > 0$. The horizontal intercept at B is $(S^{NU} + S^U) / (l_s) + C^{NU} / (l_c)$ where $L = l_s + l_c$, $l_r = 0$ when $\Pi = 1$ given (4). Three indifference curves, in figure 6.2, (U_1 , U_2 and U_3) show three possible outcomes. A and B are both corner solutions denoting outcomes when contractual rights are *ex ante* certain ($\Pi = 1$) at B and contractual rights are *ex ante* uncertain ($\Pi = 0$) at A. These are polar cases. The point C shows the first order condition for the optimal allocation of l_s and l_c given

an interior solution (ie when $0 < \Pi < 1$). The point C is a strict global maximum provided that (a) indifference curves are convex to the origin and (b) the PTC is linear or concave. The first implies diminishing marginal rate of substitution $_{x_d, x_i}$ while the second suggests diminishing marginal rate of transformation $_{x_d, x_i}$.

Equations (8) and (9) together with figure 6.2 can be used to consider the firm's allocation of labour between specialisation and collective learning as Π varies. At point B ($\Pi=1$) a required condition to allocate more labour to collective learning is that the absolute value of the slope of the PTC exceeds the absolute value of the slope of the indifference curve (U_1). The reverse is true at A. At

FIGURE 6.2



point A ($\Pi=0$) a required condition to allocate more labour to specialisation is that the absolute value of the slope of the indifference curve (U_2) is greater than the absolute value of the slope of the PTC. When we take into account marginal returns to collective learning and specialisation this suggests the following:

Proposition 6.1:

If the extent to which contractual rights are certain increases (decreases) the firm will substitute l_s for l_c (l_c for l_s) provided that the marginal returns on economies of specialisation due to formal exchange [*ie.* s^U] are greater than (are less than) the marginal returns on economies of collective learning due to informal exchange [*ie.* c^U].

Second, consider the trade-offs between collective learning and specialisation determining the size of the regional network/distinct group and extended sector.

$$\text{Let } U_{\Pi} = \alpha Y_E + (1-\alpha) Y_H \quad (10)$$

where:

U_{Π} denotes T.V.E willingness to contract for a given value of Π ,

Y_H refers to the number of T.V.Es in the regional network/distinct group,

Y_E refers to the number of T.V.Es in the extended T.V.E sector,

and α is a positive function of the size of the T.V.E sector in terms of both (i) the actual size of T.V.Es and (ii) the number of T.V.Es.

The relationship in (10) captures the dualistic structure of the expanded T.V.E sector. The parameter α is a positive function of the size and number of T.V.Es where $0 \leq \alpha < 1$. When $\alpha=0$ Y_E does not exist. This is the traditional and still predominant T.V.E regional network denoted here as Y_H . However, as the T.V.E sector grows it was suggested above that two things happen: (i) institutional innovation draws other parties into the distinct group and (ii) the T.V.E starts to contract outside of the distinct group forming a series of inter-regional relationships with other parties. The growth in the T.V.E sector is depicted in (10) via an increase in the parameter α . When α is greater than zero a dualistic

structure emerges. When this occurs there is a core of informal exchange (with some formal exchange) in a distinct group (Y_H) and a core of arms-length exchange (with some informal exchange) in the extended sector (Y_E).²⁰

Let:

$$Y_H = [\beta_d(l_s) - \mu_d(l_s)] + [C^{U*}(l_c) - R_i(l_c)] \quad (11)$$

and

$$Y_E = [\beta_i(l_c) - \mu_i(l_c)] + [S^{U*}(l_s) - R_d(l_s)] \quad (12)$$

where:

$\beta_d - \mu_d$ are the net benefits of specialisation over and above the general benefits associated with limited formal exchange in the distinct group.

$C^{U*} - R_i$ are the net benefits of collective learning in excess of the general benefits associated with informal exchange within the distinct group.

$\beta_i - \mu_i$ are the net benefits of collective learning in excess of the general benefits associated with limited informal exchange in the extended sector.

$S^{U*} - R_d$ are the net benefits of specialisation over and above the general benefits associated with formal exchange in the extended sector.

and

$$L^* = l_s + l_c \quad (13) \text{ is the relevant labour constraint}$$

Equations (11) and (12) are specified so that there is both informal and formal exchange in the distinct group and extended sector. The reason is that not all exchange in the distinct group is informal, nor is all exchange in the extended sector formal. Members of the regional network or distinct group are assumed to enter into some arms-length exchange and, in the extended sector, parties who normally exchange at arms-length are assumed to enter into some informal

relationships. However, economies of collective learning due to informal exchange in the extended T.V.E sector ($\beta_i - \mu_i$) are assumed to be a strict subset, in terms of degree, of economies of collective learning due to informal exchange within the distinct group ($C^{U*} - R_i$). This seems reasonable given that informal exchange is much more extensive in the latter. Thus, let $(C^{U*} - R_i) = (\beta_i - \mu_i) + \phi_i$ where ϕ_i denotes the difference in the net benefits from informal exchange between extended sector (Y_E) and distinct group (Y_H). The same assumption is made, but in reverse, for the net benefits from formal exchange. Economies of specialisation from formal exchange within the distinct group ($\beta_d - \mu_d$) are assumed to be a strict subset, in terms of degree, of economies of specialisation from formal exchange in the extended sector ($S^{U*} - R_d$). Thus, let $(S^{U*} - R_d) = (\beta_d - \mu_d) + \phi_d$ where ϕ_d depicts the degree to which net benefits from formal exchange in the extended sector (Y_E) exceed the net benefits from formal exchange within the distinct group (Y_H). This also seems reasonable given that casual empiricism suggests formal contracts are more widespread in the extended T.V.E sector. If we substitute (11) and (12) into (10) and maximise (10) with respect to (13) we set up a first order condition for an interior solution which is analogous to (9):

$$- | (c^{U*} - r_i) - (\beta_d - \mu_d) | (\beta_i - \mu_i) - (s^{U*} - r_d) | = \alpha U_{II}'(Y_E) / (1 - \alpha) U_{II}'(Y_H) \quad (14)$$

$$\text{where: } c^{U*} = dC^{U*}/d\lambda_i, r_i = dR_i/d\lambda_i, \beta_d = d\beta_d/d\lambda_d, \mu_d = d\mu_d/d\lambda_d, \beta_i = d\beta_i/d\lambda_i, \mu_i = d\mu_i/d\lambda_i, \\ s^{U*} = dS^{U*}/d\lambda_d, r_d = dR_d/d\lambda_d$$

The expression on the left hand side, as in (9), is the slope of a PTC. The expression on the right hand side is the slope of an indifference curve. If $\alpha=0$ we have a corner solution where all exchange occurs within a regional network and there is no extended T.V.E sector. If we start from a position where $\alpha=0$, under what conditions will the T.V.E sector extend outside the regional network? Equation (10) suggests that an extended sector will emerge when $\alpha > 0$ where, as noted above, α is a positive function of the size and number of T.V.Es. An

increase in the size and number of T.V.Es will effect the marginal net benefits to collective learning from informal exchange - $[(c^{U*} - r_i) + (\beta_i - \mu_i)]$ - and the marginal net benefits to specialisation from formal exchange - $[(s^{U*} - r_d) + (\beta_d - \mu_d)]$.

The precise effects of an increase in the number and size of T.V.Es on marginal net benefits of collective learning and specialisation is an empirical issue. Nonetheless, some observations, although somewhat arbitrary and impressionistic, are still possible. Consider the effect of an increase in the numbers and size of T.V.Es on the marginal net benefits to collective learning from informal exchange. As the number of contracting parties increases we would expect that the marginal net benefits would decrease. This is because the marginal costs of collective learning specific to informal exchange (ie. dC_c^U/dl_c or $r_i + \mu_i$) will increase. First, with larger numbers, more time and effort will need to be diverted from specialised production in the firm in order to collect and process information through informal channels. Second, with larger numbers, the costs of communication, co-ordination and bargaining in the absence of formal exchange will increase with more complex horizontal integration.

The effect of an increase in the size and number of T.V.Es on the marginal net benefit to specialisation from formal exchange, however, might not be the same over the entire range of α . First, it seems reasonable that the marginal net benefits to specialisation from formal exchange will increase with larger firms and more contracting parties for low to middle values of α . First, in terms of size, opportunities exist for economies of scale with vertical integration, but the marginal costs of specialisation due to worker alienation or boredom are likely to be small for low to middle values of α . With respect to an increase in the number of T.V.Es, the costs of facilitating specialisation through formal exchange is likely to small over low to middle values of α . It seems plausible

that for low to middle values of α an increase in the number of contracting parties will reduce the marginal cost of stipulating *ex ante* contractual rights because for the *n*th contractor most of the formal details will be in place.

However, for higher values of α we might expect that the marginal net benefits of specialisation from formal exchange will decrease with more contracting parties and larger firms. In terms of size, there is likely to be diminishing returns to scale economies. In terms of numbers, the marginal cost of *ex ante* stipulating and *ex post* enforcing contractual rights will be high. The reason is that for high values of α casual empiricism suggests the transactions will be *ex ante* more complex and, therefore, cost more (in terms of legal expenses) to enforce. We can summarise the suggested effects of an increase in α on the marginal net benefits of specialisation from formal exchange as follows: For low to intermediate initial values of α such that α is less than some specified value α^* , an increase in the number and size of firms will have a positive effect on the marginal net benefits of specialisation from formal exchange. However, for higher initial values of α (values of α greater than α^*), an increase in the number and size of firms will reduce the marginal net benefits to specialisation from formal exchange. Thus α^* is the value of α for which $(s^{U*} + \beta_d) - (r_d + \mu_d)$ changes from an increasing to a decreasing function of labour allocated to specialisation (l_s). Given these observations (14) suggests the following three part proposition:

Proposition 6.2:

Given that $\varphi_i > 0$ and that $\varphi_d > 0$,

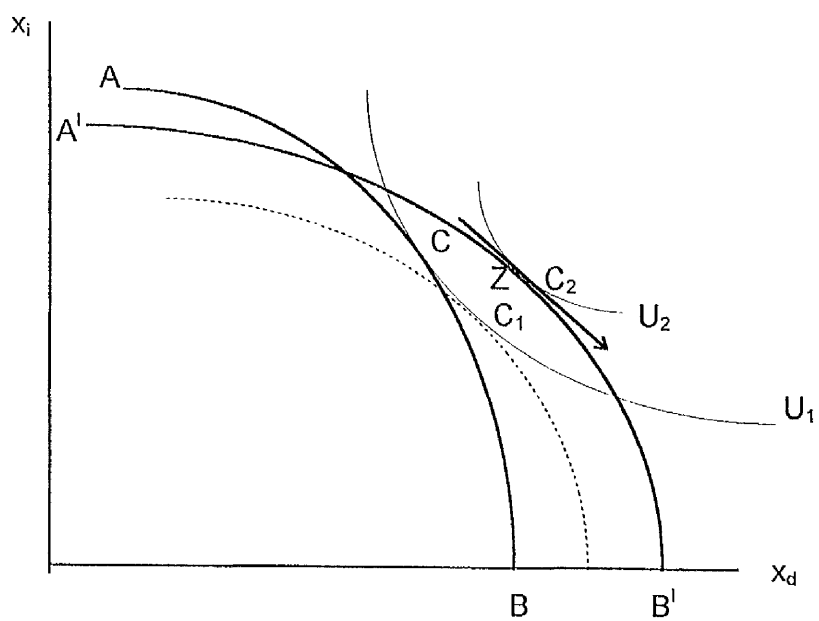
- (i) with an increase in the size of the T.V.E sector a dualistic T.V.E sector will emerge provided that the marginal net benefits of specialisation from formal exchange in the extended sector $(s^{U*} - r_d)$ are greater than the marginal net benefits of collective learning from informal exchange within the distinct group $(c^{U*} - r_i)$.

(ii) for values of $\alpha < \alpha^*$ (ie. values for which the marginal net benefits of specialisation from formal exchange are an increasing function of l_s given l_o) with an increase in the number and size of firms, the size of the extended sector will increase provided that the marginal net benefits of specialisation from formal exchange in the extended sector ($s^{U*} - r_d$) are greater than the marginal net benefits of collective learning from informal exchange within the distinct group ($c^{U*} - r_i$).

(iii) for values of $\alpha > \alpha^*$ (ie. values for which the marginal net benefits of specialisation from formal exchange are a decreasing function of l_s given l_o) with an increase in the number and size of firms, the size of the extended sector will increase provided that (a) the marginal net benefits of collective learning from informal exchange ($c^{U*} - r_i$) are greater than the marginal net benefits of specialisation from formal exchange ($\beta_d - \mu_d$) within the distinct group, (b) the marginal net benefits of specialisation from formal exchange ($s^{U*} - r_d$) are greater than the marginal net benefits of collective learning from informal exchange ($\beta_i - \mu_i$) in the extended sector and (c) the marginal net benefits of specialisation from formal exchange in the extended sector are greater than the marginal net benefits of collective learning from informal exchange within the distinct group.

Third, consider the effect of an exogenous increase in the size of the T.V.E sector on the relationship between collective learning, specialisation, informal and formal exchange. To do this we must spell out what, to this point, has been implicit: (i) $S^U = (S^{U*} - R_d) + (\beta_d - \mu_d)$ and (ii) $C^U = (C^{U*} - R_i) + (\beta_i - \mu_i)$. When the equality in equation (14) holds (first order condition for an interior solution) there will be a value of Π for a given α which corresponds to the optimal value of Π in equation (9). This corresponds to the value of Π at C in figure 6.2. To show the effect of an increase in α on Π in terms of both equation (9) and figure 6.2 consider figure 6.3. Assume that there is an exogenous increase in the number

FIGURE 6.3



and size of firms. The intercepts of the PTC in figure 6.2 will change. With an increase in α , the maximum possible S^U will increase while the maximum possible C^U will decrease provided that $\phi_l > 0$ and $\phi_d > 0$. This follows when equations (11) and (12) are inserted into (10). The PTC will rotate as shown in figure 6.3. A^1 will lie below and to the left of A and B^1 will lie to the right of B.

Point C in figures 6.2 and 6.3 correspond. The dotted PTC in figure 6.3 has the same MRT_{x_d, x_l} as $A^1 B^1$ for given values of x_d and x_l (ie for given values of Π). The premise underpinning figure 6.3 is that an increase in the number and size of firms will generate a substitution effect and a labour effect. First, consider the substitution effect. If the PTC rotates from AB to $A^1 B^1$ the absolute value of the slope of the indifference curve (U_1), at C, is greater than the absolute value of the slope of the PTC - AB^1 . The firm will thus substitute towards x_d given that s^U is greater than c^U at C. This process will continue until the slopes are the same for given x_l and x_d . Thus C to C_1 , along U_1 is the substitution effect.

With an increase in the number and size of firms, more scope exists for the division of labour (see Chen 1987, Yang & Wills 1990). The labour effect captures the effect on the division of labour. The labour effect will be from C_1 to C_2 in figure 6.3. At Z on $A^1 B^1$ the MRT_{x_d, x_l} is the same as the MRT_{x_d, x_l} at C_1 . Thus the slope of $A^1 B^1$ at Z is the same as the slope of AB at C_1 . The indifference curve (U_2), in figure 6.3, is drawn so that it is tangent to $A^1 B^1$ at Z (C_2 and Z coincide). This suggests that greater scope for the division of labour is allocated between specialisation and collective learning in equal amounts. The point to note is that the labour effect is neither positive nor negative. The reason is that s^U equals c^U at C_1 . Therefore, at C_1 , there is no incentive for the firm to either increase l_s relative to l_c which would generate a positive labour effect or increase l_c relative to l_s which would generate a negative labour effect.

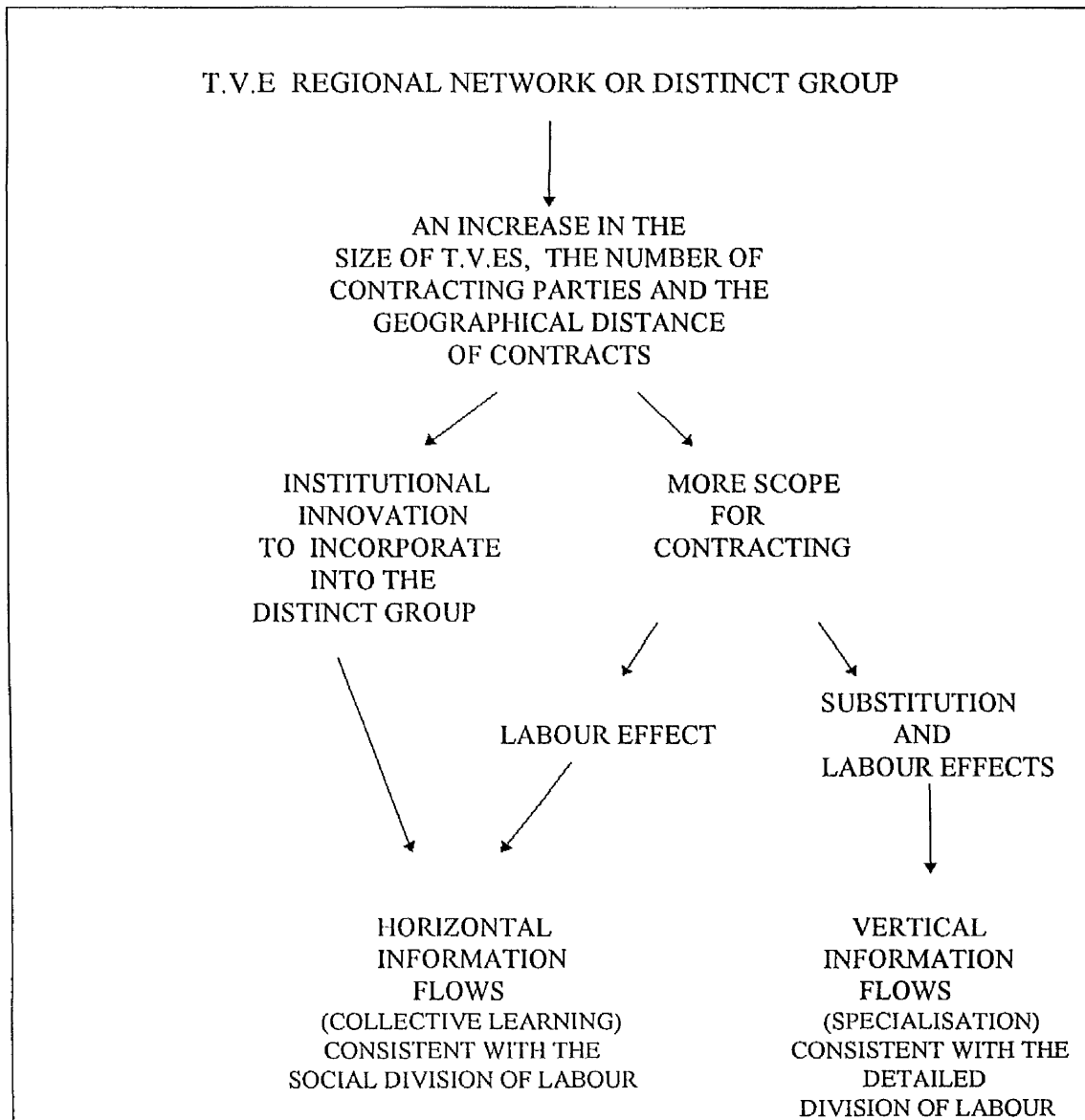
Proposition 6.3:

With an increase in the size of the T.V.E sector, economies of specialisation due to formal exchange will increase relative to economies of collective learning due to informal exchange. The effect which an increase in the size of the T.V.E sector has on the trade-off between collective learning and specialisation can be broken down into the labour and substitution effects. Economies of specialisation due to formal exchange will increase relative to economies of collective learning due to informal exchange with an increase in the size of the T.V.E sector because of the substitution effect. The labour effect, however, promotes both economies of collective learning and economies of specialisation.

6.4 IMPLICATIONS IN TERMS OF THE DIVISION OF LABOUR

The implications in terms of the division of labour are considered in figure 6.4. It extends figure 6.1 to incorporate information flows and different concepts of the division of labour. It provides a schematic representation of the implications of an increase in the size of the T.V.E sector on horizontal and vertical information flows. To do this, figure 6.4 places proposition 6.3 from the formal presentation, and the earlier verbal argument relating to institutional innovation, into a consistent framework. With an increase in the number and size of firms, more opportunities exist for both horizontal information flows based on informal exchange and vertical information flows based on formal exchange. First, institutional innovation and more scope for the division of labour through the labour effect generate horizontal information flows. Second, both the substitution and labour effects generate vertical information flows. When we extend this framework to take account of the different concepts of the division of labour, a rationale exists for informal and formal exchange. As outlined above, and in chapter three, the detailed division of labour is consistent with vertical coordination and the social division of labour supports horizontal coordination.

FIGURE 6.4
THE INSTITUTIONAL EFFECTS OF THE GROWTH OF THE T.V.E SECTOR ON
HORIZONTAL AND VERTICAL INFORMATION FLOWS



This raises wider issues about whether incomplete private property rights and less than arms-length exchange are feasible alternatives. The two previous attempts to consider this issue in these terms are in the market tradition of the firm (see Yang & Wills 1990, Ng & Yang 1995). Both conclude that the immediate introduction of unambiguous property rights is a precondition for sustained growth and argue that China's legal system hampers economic reforms because of its incomplete protection of private entrepreneurs' residual rights. In this respect, their reasoning is that more certain contractual rights is essential to promote the detailed division of labour and economic development. Hence, the detailed division of labour and economic development are seen as opposite sides of the same coin. For example Ng & Yang (1995 pp.11-18) state:

"laws that protect free association and the residual rights of owners of firms are a driving force in economic development. Such protection of entrepreneurs' residual rights can promote the division of labour in producing intangible management services and encourage experiment with various patterns of organisation and division of labour. This will in turn speed up the evolution of the division of labour that generates endogenous economic growth and technical progress. Chinese entrepreneurs' claims to residual rights of firms cannot be well protected in the absence of a well stipulated property law and fair competition law. Hence, organisational innovation, which is a precondition for technical progress and the success of China's reforms cannot be well developed".

However, the view that unambiguous property rights are a precondition for sustained growth overlooks the role of collective learning through informal exchange. Yang & Wills and Ng & Yang suggest that an increase in the detailed division of labour will occur simultaneously with an increase in the

number of contracting parties, but the role of the social division of labour is not considered. Three implications follow when we bring the social division of labour into the picture. (i) If the degree to which contractual rights are certain increases, the detailed division of labour (specialisation) will increase relative to the social division of labour (collective learning). (ii) As the number of contracting parties increase a dualistic structure emerges where (a) economies of collective learning are nurtured within a regional network or distinct group while (b) economies of specialisation are developed within an extended sector. (iii) In the case of an interior solution, the optimal outcome will be a solution where some ambiguity exists in the certainty of contractual rights - ie. $0 < \Pi < 1$.

The first point suggests that rather than putting private property rights in place from the start, the gradual introduction of less ambiguous property rights might be preferable as the T.V.E sector grows. The second point recognises that both informal and formal exchange present benefits and costs and there is a role for collective learning and specialisation. The third point implies that some ambiguity in property rights is optimal which is consistent with Li's (1996) recent article, although he reaches this conclusion through taking a different approach. Li (1996) presents a model of the Chinese non-state sector which is based on the theory of grey markets (see section 5.2). His main conclusion (at p.16) is that "an unconditional call for clarifying the ownership and property rights of enterprises, a popular slogan in China, may not be appropriate for transition economies. Given the greyness and imperfections of the market, a *proper degree of ambiguity of property rights is perhaps necessary*" (emphasis mine).

The broader implications relate to the similarities in the dualistic nature of the J-mode and T.V.E contracts. The dualistic character of the J-mode is well documented in Aoki (1990) and Itoh (1987), amongst others, but the emerging

dualism in the T.V.E sector, while hinted at in different writings, has not been discussed or modelled in an explicit fashion. The chapter suggests that there are lessons in the J-mode experience for understanding both the T.V.E sector as it now is and its further development. Again the most important lesson hinges on recognising the dual character of the division of labour. The collective learning theme has a strong tradition in the J-mode literature. It follows that perhaps one of the reasons for neglecting the role of the social division of labour in the past has been the failure to see the similarities between the J-mode and T.V.Es.

6.5 CONCLUSION

This chapter had two inter-related aims. The first was to provide a simple model that formalises some trade-offs in the (emerging) expanded T.V.E sector. The second was to point out some similarities in the dualistic character of the external contracts of the J-mode and the T.V.E. The J-mode is often given as an example of a firm which contradicts standard textbook learning. Thus the suggestion, in this chapter, that there are similarities between the J-mode and T.V.E carries broader connotations for the post-socialist transition/post-socialist transformation debate. The notion that there is a role for collective learning within a regional network or distinct group which is based on informal exchange runs contrary to the orthodox transition theme prominent in the literature on Eastern Europe. In this respect the experience of the J-mode implies that unambiguous property rights *per se* need not be the end objective of post-socialist transition. Instead there is a good argument for seeing the post-socialist transformation process as *ex ante* open-ended where different organisational forms premised on informal and formal exchange and consistent with the detailed division of labour and social division of labour can coexist.

CHAPTER 7
EMPIRICAL TESTS OF THE RELATIONSHIP BETWEEN INCOME AND
PROFIT AND THE RELATIONSHIP BETWEEN T.V.Gs AND WORKER
SOCIALISATION

7.1 INTRODUCTION

The last two chapters suggested some theoretical propositions about T.V.Es. This chapter presents two sets of regressions which test a couple of empirical based propositions in those chapters. However, it should be said from the start that no attempt will be made to provide a direct test of either of the models developed in chapter five or six. The problem relates to what data are available. To test the model developed in the last chapter, for example, we would need proxies for both the detailed and social division of labour. But the sort of data from which reasonable proxies could be constructed are not available. This chapter, therefore, has more modest aims. The first objective is to provide a test of the extent to which T.V.E behaviour corresponds to the behaviour of the J-mode. To do so the relationship between T.V.Es' labour share and profit rate will be considered. The second more speculative objective is to test the argument, raised in chapter five, that the importance of T.V.Gs as a monitor on the evolution of collective norms diminishes with increased worker socialisation.

Both sets of regressions use pooled cross sectional and time series data. The sample observation points were 28 provinces (Hainan and Tibet were excluded because of lack of data). The time period covered in the income-profit regression was 1987-1991 inclusive and 1993. The time period covered in the T.V.G-socialisation regression was 1989-1991 inclusive. The regression, looking at the relationship between worker income and T.V.E profits, will be presented in section 7.2. The regression looking at the relationship between T.V.G influence and socialisation into the T.V.E will be presented in section 7.3. The two sections are set out in the same way. (i) The specification(s) is (are) set out and the choice of variables is considered. (ii) Prior expectations about the results

are discussed. (iii) The initial results are presented and the statistical issues are examined. (iv) The results are recalculated where methodological shortcomings exist and (v) The results are reviewed in the light of prior expectations.

7.2 THE RELATIONSHIP BETWEEN WORKER INCOME AND T.V.E PROFITS

The Specification

To test the income-profit relationship in T.V.Es the following function was used:

$$\ln (\text{INCOME})_t = a + b_1 \text{PROFIT}_t + b_2 \text{SIZE}_t + b_3 \text{EDUC}_{t-1} + b_4 \text{MALE}_t + b_5 \text{ECONOMIC}_t + b_6 \text{RE}$$

where:

INCOME is a measure of worker share,

PROFIT is a measure of the T.V.E's profit rate,

SIZE is a measure of the T.V.E's size,

EDUC is a measure of workers' education,

MALE captures (potential) male-female wage differences,

ECONOMIC measures the effect of macroeconomic conditions and

RE is a vector of regional dummies.

The choice of proxies for each variable was dependent on what data were available. The choice of proxies also involved an iterative process where different possibilities were tested and, in some instances, discarded. The construction and limitations of the proxies in each case are elaborated below.

dependent variable:

INCOME

Two different proxies were tried, at the start, for this variable. The first was the average wage in T.V.Es (total wage bill/ total number of workers). The second was a measure of the workers' share in T.V.Es (total wages per 1000 Yuan revenue). The second measure performed much better. A possible explanation for this might be that average wages are dependent on region specific

factors, in particular economic rents which are not picked up in the regression. For this reason the workers' share measure was preferred. The pooled data for both average wage and workers' share was converted to 1987 Yuan. The proxies were constructed from data in *Zhongguo Xiangzhen Qiye Nianjian* (various volumes).

independent variables:

(1) PROFIT

Two different proxies for PROFIT were used - (a) the profit/sales ratio and (b) the profit/assets ratio. Total (pre-tax) profit per 1000 Yuan revenue was used to represent the profit/sales ratio. Total (pre-tax) profit per 1000 Yuan gross fixed assets was used to represent the profit/assets ratio. The pooled data on both proxies were expressed in 1987 Yuan. Both proxies were constructed from data in *Zhongguo Xiangzhen Qiye Nianjian* (various volumes).

(2) SIZE

Two proxies were used for SIZE. The first was the average number of workers in each T.V.E (total workers/total number of T.V.Es). The second was average revenue (total revenue/total number of T.V.Es). The latter was used to pick up possible divergences between size in terms of worker numbers and size in terms of output value which need not be the same. The pooled data for average revenue was expressed in 1987 Yuan. The source for both proxies is *Zhongguo Xiangzhen Qiye Nianjian* (various volumes).

(3) EDUC.

There are no data on the education standard of T.V.E workers at an aggregate level. Thus a provincial level measure was used - the number of secondary school graduates per 1000 population. This proxy was constructed from the *China Statistical Yearbook* (various

volumes). The education variable is lagged one period. The rationale for this is that it seems reasonable that students graduating in period t will not enter the workforce and therefore have a potential impact on income levels until period $t+1$. The proxy used raises two issues. The first is that it is not an actual measure of the education level of T.V.E workers, but the education level of the workforce as a whole. Therefore, the implicit assumption is that the proportion of educated individuals in the wider workforce is an accurate reflection of the proportion of educated workers in T.V.Es. There is no clear evidence on this point. And the evidence that does exist is both fragmentary in nature and restricted to observations on specific localities. Song (1990 p.406) suggests, on the basis of survey evidence in four counties - Wuxi in Jiangsu, Jieshou in Anhui, Shangrao in Jiangxi and Nanhai in Guangdong - that: "the educational level ... of sample workers in T.V.Es are a bit lower than those of local state enterprise workers". Ho (1994 pp.147-148), however, concludes, on the basis of interview evidence, that the education level of T.V.E workers in Jiangsu is slightly higher than the provincial average. Hence conflicting views makes it difficult to draw firm conclusions.

A second issue is whether the number of secondary school graduates is a good measure of education. There is a reasonable argument that it is. First, it is a commonly used proxy in the development and growth literatures. Second, Gelb (1990) reports on the basis of the same firm level data that Song (1990) used that the most common educational attainment in the T.V.Es sampled was junior middle school. Wong *et al* (1995) examine ten T.V.Es in Jiangsu and Shandong as case studies. Information on education,

profit and wages in the ten T.V.Es is presented in table 7.1. Data on the education of the manager is given for nine of the enterprises and data on the education of the employees are given for six of the enterprises. Most of the managers had completed secondary school and most of the workers junior middle school. While there is no breakdown for junior middle school graduates in the aggregate statistics the grouping "secondary school graduates" includes *inter alia* both junior and senior middle school graduates.

(4) MALE

This variable is intended to capture the effect of a potential male-female income differential on total worker income. There is, however, no data giving separate breakdowns on male and female wages in T.V.Es. Thus the proxy used was males per 1000 T.V.E workers. The source is *Zhongguo Nongye Nianjian* and the English Edition *China Agriculture Yearbook* (various volumes). The rationale for using males per 1000 T.V.E workers is that if a positive (negative) male-female earning differential is influencing worker incomes this will be reflected in regions where a greater percentage of the workforce is male (female). Having said this, the number of males relative to females working in T.V.Es is far from a perfect means of capturing a possible earning differential. While it was the best alternative available, we need to be aware that it might not be an accurate measure when reviewing the results.

(5) ECONOMIC

This variable is intended to reflect the effect of macroeconomic conditions on worker income. The first choice proxy for this variable was the number of annual new projects which T.V.Es started. The problem, however, was that no consistent data were available over the time period. It were available some years for

total T.V.Es, others for industrial T.V.Es and others no data were available on new projects at all. Thus an alternative proxy - the number of loss-making firms per 1000 T.V.Es - was used. This proxy was constructed using data in *Zhongguo Xiangzhen Qiye Nianjian*. The reasoning, therefore, is that in times of economic downturn the proportion of loss making firms will be greater.¹

Prior Expectations

The theoretical arguments developed in the preceding two chapters suggest some general propositions about the factors that determine the workers' share:

1. If T.V.E behaviour reflects J-mode behaviour the workers' share will reflect the T.V.E's performance. This might show up in the regression in two places - the PROFIT and ECONOMIC variables. There is a close relationship between the profit rate and workers' share in the J-mode (see eg Nakatani 1984). Thus, if the T.V.E and J-mode are similar we would expect PROFIT to be statistically significant with a positive sign. While the sample size is small, some general observations on the relationship between labour share and the profit rate can be made on the basis of the case studies in table 7.1. First annual income in the Cable Factory is the highest, while annual incomes in the Engine Parts Factory and Silk Mill are the lowest. At the same time the Cable Factory is the most profitable while the Engine Parts Factory and Silk Mill are the least profitable. Second, the differential between the manager's income and the workers' average income seems dependent on the profitability of the firm. According to the 1988 State Council's Provisional Regulations for the Contract Responsibility System in S.O.Es (which T.V.Es are supposed to follow as a guideline) the manager's wage should not be more than three times the average worker (Wong *et al* 1995 p.45). However, the Cable

TABLE 7.1
Educational Attainment, Profits and Wages in the Ten T.V.Es Examined as Case Studies in
Wong *et al* (1995)

Name of Firm	"Owner"	Gross Profit (1991 million yuan)	Number of Workers (1991)	Profit per Worker (1991 yuan)	Average Annual Income (1991 yuan)	Income of Manager (1991 yuan)	Education of the manager	Education of Employees
Shandong								
Fishing Gear Enterprise	Town	2.0	612	3,268	1,657	N.A	Agro-Technical School	N.A
Plastic Medical Products Factory	Town	2.5	1,320	1,894	2,400	6,000	Secondary School	Junior Middle School or higher (p.89)
Engine Parts Factory	Town	0.1	160	625	1,583	2,400 (1992)	Secondary School	80% Junior Middle School, 20% Senior High School (p.117)
Foundry	Village	2.4	170	1,176	N.A	N.A	Secondary School	N.A
Garment Factory	Town	1.5	924	1,623	2,326	N.A	N.A	High School (p.169)
Jiangsu								
Silk Mill	Village	loss	310	-	1,800	2,500	Secondary School	N.A
Oil Refinery	Town	2.5	273	9,156	2,400	10,659	Secondary School	Mostly Middle School (p.229)
Cable Factory	Town	6.5	467	13,919	3,778	20,000	Elementary School	Mostly Junior High School (p.251)
Eiderdown Products Factory	Town	0.4	205	1,951	1,531	14,000	Secondary School	61% Junior Middle School, 19% Primary School, 9% High School (p.289)
Paint Factory	Town and Village	1.0 (Jan-Oct 1992)	78	1,282	N.A	N.A	Secondary School	N.A

NOTES: (i) TVEs are described in the same way as in Wong *et al* (1995) - ie. as the "Fishing Gear Enterprise", the "Engine Parts Factory" *etc.* (ii) N.A = Not available

SOURCE: Wong *et al* (1995) table 2.3, table 2.4. The information on the educational attainment of workers is spread throughout the book - page references are noted in table.

Factory and Oil Refinery which were both extremely profitable paid their managers many times the salary of the average worker. On the other hand, in the Engine Parts Factory and Silk Mill which were not performing well the manager was paid only marginally more than the average worker.

The previous statistical work on T.V.Es to consider the relationship between PROFIT and wages is conflicting. Gelb (1990) found that PROFIT was a statistically significant determinant of wages in the World Bank sample mentioned above using data on T.V.Es in four counties. However, Pitt and Putterman (1996), using firm level data on T.V.Es across ten provinces, and Xu (1995), using aggregate pooled data from 1984 to 1987, found that wages were not correlated with PROFIT. If the workers' share reflects enterprise performance we would also expect ECONOMIC to be statistically significant. The problem is that it is difficult to capture the macro-position of individual firms using aggregate data, but if there is a high proportion of loss-making firms this suggests relative economic stagnation which should show up in a lower workers' share.

2. The model developed in chapter five stressed the broad notion of social and historical embeddedness in explaining how T.V.Es have evolved. The importance of path dependent considerations was also emphasised. The social and historical context in which T.V.Es have developed suggests that the workers' share might, on the whole, be determined by broader firm and communal considerations. The importance of the T.V.E's broader obligations to its nominal owners - the township and village residents - is relevant here. If broader communal considerations do determine wages it might follow, at least at a superficial level, that personal characteristics such as education and, to a lesser extent, sex will be of marginal importance.² However, the latter might not be a good

example of a "personal characteristic" because of possible wage discrimination against women in rural areas. Gelb (1990) *et al* provide empirical evidence of wage discrimination against women in T.V.Es, and Huang (1995) *et al*³ document discrimination in the wider labour market.

3. The model presented in the last chapter, suggested that as T.V.Es become larger their communal character diminishes. This is evident in the labour market in the coastal provinces. For example, Ho (1994) documents the trend amongst T.V.Es in southern Jiangsu to hire immigrant workers, as labour in the local communities is exhausted. This has had two effects. First, the immigrant workers have no ties to the area so the communal nature of the T.V.Es is undermined. Second, as labour markets have developed to meet the demand for immigrant labour there has been a trend towards more market determined distribution. This contrasts with T.V.Es in less developed rural areas, in particular in the interior provinces, where broader social obligations are important including the provision of jobs for the local residents. There tends to be surplus labour in these T.V.Es which implies that the wage rate is greater than the marginal product of labour (MP_L). However, where labour markets are more developed, and social obligations less important - in the coastal provinces - we would expect the wage rate to be closer to the MP_L . If this is the case we might expect that the worker share would be smaller in the larger T.V.Es which tend to be in the coastal provinces.

The Results

The initial results are presented in tables 7.2 and 7.3. The results using the functional form above (with a natural log of the dependent variable) are in table

TABLE 7.2
Regression Results For All Provinces 1987-1991, 1993
The Dependent Variable is ln (Total Wages Per 1000 Yuan Revenue)

<u>independent variables</u>	(i)	(ii)	(iii)	(iv)
1. Total Profit per 1000Yuan Revenue	.62 (10.94)	.58 (10.63)	NE	NE
2. Total Profit per 1000 Yuan Fixed Assets	NE	NE	.36 (4.82)	.33 (4.74)
3. Average Number of Workers per firm	-.62 (3.11)	NE	-.49 (1.95)	NE
4. Average Revenue per firm	NE	-.33 (5.29)	NE	-.39 (5.03)
5. Number of Secondary School Graduates per 1000 population	.11 (1.87)	.10 (1.88)	.09 (1.29)	.08 (1.14)
6. Males per 1000 workers	.07 (1.26)	.06 (1.12)	.07 (.94)	.06 (.88)
7. Number of loss making firms per 1000 firms	.47 (2.36)	.04 (.60)	.40 (1.63)	.19 (1.53)
8. D-CENTRAL	.60 (3.87)	.46 (3.98)	.49 (4.87)	.79 (5.22)
9. D-WESTERN	1.28 (4.71)	1.97 (6.26)	1.33 (3.33)	.94 (4.76)
D.W	1.00	1.05	1.08	1.24
Adjusted co-efficient of Determination	.47	.52	.19	.29

NOTE:

(1) The number of cases was 168. (2) The eastern zone covers Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Guangxi. The central zone: covers Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan; The western zone covers Sichuan, Guizhou, Yunnan, Shaanxi Gansu, Qinghai, Ningxia and Xinjiang. Hainan and Tibet was excluded because of lack of data. (3) NE denotes that the proxy was not included in the regression. (4) The figures in parenthesis are t-values. (5) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

TABLE 7.3
Regression Results For All Provinces 1987-1991, 1993
The Dependent Variable is Total Wages Per 1000 Yuan Revenue

<u>independent variables</u>	(i)	(ii)	(iii)	(iv)
1. Total Profit per 1000Yuan Revenue	.36 (4.91)	.31 (4.30)	NE	NE
2. Total Profit per 1000 Yuan Fixed Assets	NE	NE	.45 (6.10)	.42 (5.99)
3. Average Number of Workers per firm	-.39 (1.85)	NE	-.19 (.87)	NE
4. Average Revenue per firm	NE	-.28 (3.51)	NE	-.28 (3.69)
5. Number of Secondary School Graduates per 1000 population	.05 (.63)	.04 (.52)	.02 (.24)	.00 (.02)
6. Males per 1000 workers	.11 (1.43)	.10 (1.37)	.09 (1.22)	-.08 (1.23)
7. Number of loss making firms per 1000 firms	.27 (1.33)	.02 (.25)	.15 (.71)	.08 (.07)
8. D-CENTRAL	.52 (1.90)	.24 (1.88)	.47 (1.64)	.51 (1.96)
9. D-WESTERN	.81 (2.25)	.45 (2.67)	.69 (2.22)	.78 (2.23)
D.W	1.16	1.24	1.21	1.38
Adjusted co-efficient of Determination	.16	.20	.22	.27

NOTE:

(1) The number of cases was 168. (2) The eastern zone covers Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Guangxi. The central zone: covers Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan; The western zone covers Sichuan, Guizhou, Yunnan, Shaanxi Gansu, Qinghai, Ningxia and Xinjiang. Hainan and Tibet was excluded because of lack of data. (3) NE denotes that the proxy was not included in the regression. (4) The figures in parenthesis are t-values. (5) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

7.2. The results using a linear functional form for the dependent variable, for purposes of comparison, are in table 7.3. The results for both proxies of PROFIT (Total Profit per 1000 Yuan Revenue & Total Profit per 1000 Yuan Fixed Assets) and both proxies of SIZE (Average Number of Workers per Firm & Average Revenue) are presented. The results are not satisfactory. PROFIT and SIZE are both consistently significant with the expected signs regardless of functional form. However the Durbin-Watson statistic is low in each regression such that it is impossible to reject the existence of serial correlation at any reasonable level of significance. While the regional dummies indicate significant variation in workers' share across zones, the adjusted co-efficient of determination, in most of the regressions, is also low. The best results, in terms of the adjusted co-efficient of determination, were obtained using Total Profit per 1000 Yuan Revenue to measure PROFIT and Average Revenue per Firm to measure SIZE (regression (ii) in table 7.2). Thus, given that the initial regressions suggest that both proxies for PROFIT and SIZE give similar results it was decided to use a Cochrane-Orcutt transformation on this regression (regression 2 in table 7.2) to attempt to remove the serial correlation. The results for the Cochrane-Orcutt regression are in table 7.4. The transformation was successful in removing the serial correlation. The Durbin-Watson statistic (1.86) is such that $d > d_u$ so H_0 ($\rho=0$) is not rejected at the 5% level. PROFIT and SIZE remain significant at the 1% level, but the adjusted co-efficient of determination is still low. Given this, a separate regression was run omitting the insignificant variables. However, the results which are reported as regression (ii) in table 7.4 were almost identical.⁴

INTERPRETATION OF THE RESULTS

The low adjusted coefficient of determination is a disappointing feature of the results, but the performance of individual variables seems consistent with prior expectations. This subsection elaborates on the results for individual variables and explores some reasons for the low adjusted coefficient of determination.

TABLE 7.4
Regression Results Using A Cochrane-Orcutt Transformation
The Dependent Variable is ln (Total Wages Per 1000 Yuan Revenue)

independent variables	(i)	(ii)
1. Total Profit per 1000Yuan Revenue	.46 (6.45)	.46 (6.46)
2. Average Revenue per firm	-.26 (3.42)	-.28 (3.83)
3. Number of Secondary School Graduates per 1000 population	.11 (1.54)	NE
4. Males per 1000 workers	-.03 (-.44)	NE
5. Number of loss making firms per 1000 firms	-.05 (-.74)	NE
6. D-CENTRAL	.52 (5.65)	.31 (3.22)
7. D-WESTERN	1.65 (4.09)	1.08 (2.89)
D.W	1.86	1.84
Adjusted co-efficient of Determination	.34	.34

NOTE:

(1) Cochrane-Orcutt Transformation is on regression (ii) in table 7.2 (2) The number of cases was 140. For provinces in each zone see tables 7.2 and 7.3. All provinces were included (except Hainan & Tibet which were excluded because of lack of data) over 1987-1991, 1993 (3) NE denotes that the variable was not included in the regression. (4) t values are in parenthesis. (5) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

(1) PROFIT

The results in table 7.4 indicate that PROFIT is significant at the 1% level. This seems to confirm the notion that there is a close relationship between the profit rate and workers' share in T.V.Es and also gives support to the view that T.V.E behaviour comes close to J-mode behaviour. However, as noted above, previous empirical research has reached differing conclusions on this issue. Pitt and Putterman (1996), using firm level data, and Xu (1995), using aggregate data, found no statistical relationship between the profit rate and wages. A possible explanation for the difference between the results here and the results in the Pitt & Putterman (1996) and Xu (1995) studies might lie in the choice of proxies for the dependent variable. Both Pitt & Putterman and Xu use average wages to measure the dependent variable. The results here indicate that profit sharing (wages/profits) in T.V.Es is in line with the J-mode - rather than wage setting *per se* or the mechanism (T.V.Gs or otherwise) through which wages are set. Wages might be determined through a range of factors and Xu (1995) points out that his results are consistent with field research which has found that some community governments force T.V.Es to adopt the wage policies of local state firms.

Lin *et al* (1992) and Gang (1993) investigate this issue in field research. Lin *et al* (1992) sampled 400 T.V.Es in Yuanping County, Shanxi in 1984-85. The responses which they received when T.V.Es were asked about how wages were set and the reason for the most recent wage increase are presented in table 7.5. Only 11.1% of T.V.Es responded that wages were determined solely by the T.V.G. However, in a further 38.9%, wages were either mutually agreed between the T.V.E and T.V.G or had to be submitted to the T.V.G for approval. With respect to the most recent wage increase or bonus only 17.4% of T.V.Es said that it had been

TABLE 7.5
Wage Setting and the Reasons for Wage Increases in Lin *et al*'s (1992) Sample of T.V.Es
in Yuanping County, Shanxi Province
 (% of total firms sampled)

<u>Wage determination</u>	
Wages set by TVG	11.1
Wages mutually agreed between TVE and TVG	16.7
Wages set by TVE, but have to be submitted to the TVG for approval	22.2
Wages determined solely by the TVE	50%
<u>Reasons for the most recent wage increase or bonus</u>	
Arranged by the TVG	17.4
Due to an increase in enterprise retained profits	21.5
overtime or piecework	32.2
Influenced by pressure from wage increases in other enterprises	28.9%

SOURCE: Lin *et al* (1992) p.262

TABLE 7.6
Local Government Influence on Wage Setting in Gang's (1993) Sample of Rural
Enterprises in Sichuan and Zhejiang Provinces

	<u>Does The Enterprise Sets Wages Independently?</u>	
	<u>Yes (%)</u>	<u>No (%)</u>
Whole Sample	79.8	19.2
Collective	73.3	25.6
Non-Collective	84.5	14.9

SOURCE: Gang (1993) table 10

arranged by the T.V.G. For the rest it was due to either an increase in enterprise retained profits (21.5%), overtime or piecework (32.2%) or because of pressures due to wage increases in other enterprises (28.9%).

Gang (1993) surveyed 630 rural enterprises (262 collective and 368 non-collective) in Sichuan and Zhejiang in 1991. He asked whether the rural enterprise set wages independently. His results are reproduced in table 7.6. About 25% of the collective enterprises and 15% of the non-collective enterprises were subject to government interference in wage setting. The smaller figure for non-collective enterprises is consistent with the World Bank finding that in Wuxi average income in the local private sector was higher than in local state-owned enterprises (Byrd & Lin 1990 pp.15-16). Nevertheless, if T.V.Gs are exerting a strong influence over local wage setting practices in collective enterprises in particular, this gives some support to the view, postulated above, that the average wage might be picking up regional specific factors. But this suggestion is tentative, given that the initial regressions which were run in this exercise, using average wage as the dependent variable, did not shed light on the issue. The results are not reported, but each of the independent variables was insignificant and the adjusted coefficient of determination was low. This makes it impossible to draw firm conclusions.

This said, the results for PROFIT are consistent with the attitudes which workers expressed in T.V.Es in the sample of four counties which the World Bank conducted. The results of the worker questionnaire are reported (in part) in Gelb (1990). Most workers in the sample thought that

there was a close relationship between their incomes and the profit rate of their firm. A total of 71% thought that the link was strong or very strong, while just 10% saw no link at all. This breakdown was consistent across each of the four counties. This sort of evidence, of course, is sporadic in nature. There are also well-known limitations on this sort of field research. These include the fact that the World Bank results are based on T.V.Es in a few select localities (although each was a major T.V.E region) and that there are methodological problems with opinion surveys which might be biasing the results. The opinions expressed on the income-profit relationship, nevertheless, support the findings here and the broader argument regarding similarities between T.V.Es and the J-mode.

(2) SIZE

SIZE has a negative sign and is significant at the 1% level. This is consistent with the suggestion above that in larger T.V.Es communal obligations are less important. This is related to the idea, developed in the last chapter, that as T.V.Es become larger there is a trade-off between the social division of labour and the detailed division of labour. This is also related to the trend, mentioned above, for larger firms, in particular in the coastal provinces, to hire immigrant labour. This undermines the communal culture which underpins the collective learning theme at a localised level. The local social basis of the T.V.E, premised on its obligations under a communal welfare function - including the provision of jobs to local residents - becomes marginalised as part of this process.

The results for SIZE appear consistent with the two part view: (i) There might be surplus labour in the smaller - communal based - T.V.Es and if so this suggests that the wage rate is in excess of the marginal product of labour (MP_L) (ii) Where labour markets are more developed, and social obligations less important - such as in the larger T.V.Es in the coastal provinces - the wage rate is more in line with the MP_L . The results for the regional dummies, support this perspective. The workers' share in the eastern zone is statistically lower than in the central and western zones *ceteris paribus*. But, at least at first glance, this seems inconsistent with some recent studies such as Xu (1995), Dong & Putterman (1996) and Pitt & Putterman (1996). Xu (1995) found that for T.V.Es, across all provinces, the mean MP_L was 2.8 times higher than the wage rate. Dong & Putterman (1996) found that for T.V.Es across 15 provinces the mean MP_L was 3.6 times higher than the wage rate. However, these results might reflect a labour shortage in the most developed coastal regions.

In both Xu (1995) and Dong & Putterman (1996) the difference between MP_L and wages was largest in the most developed coastal provinces. Dong & Putterman (1996 p.74) report that the regional dummy variables showed that the mean gaps between MP_L and wages in the coastal provinces were significantly larger than in the non-coastal provinces. Xu's results were similar. He reports (at p.35) that in 1987 in the most developed province - suburban Shanghai - the MP_L was 5.6 times higher than the T.V.E wage. This suggests that even if the MP_L is greater than the wage rate for T.V.Es as a whole this does not rule out the possibility that the reverse might be true if small rural and communal based T.V.Es were considered in isolation. For example Dong & Putterman (1996 footnote 19) note that when the non-coastal provinces in their sample were introduced separately, the regional dummy estimates were not

statistically significant in any of them. Xu (1995 p.40) acknowledges the point that "in many surveys researchers have found that while a labour shortage is a serious problem in relatively industrialised areas, in most rural areas the still abundant labour supply has not been fully utilised".

A lot of research suggests that the areas of labour shortage are restricted to a few core regions near the coast and near major urban areas (see eg Blank & Parish 1990, Perkins 1990, Knight & Song 1993, Parish 1994). There is also evidence to suggest that the amount of available labour varies between developed and developing regions in the same province. For example, Ho (1994) found that there was a shortage of labour in the marketised sunan region, but in the less developed northern parts of Jiangsu there was a substantial labour surplus. Consistent with the results for SIZE using provincial level data, it is well known that T.V.Es in southern Jiangsu are larger than those in the northern part of the province. In fact village enterprises in the south are as large and often larger than township enterprises in the north. To illustrate, in the mid 1980s on average, the size of village industrial enterprises in the south delta region (59 workers per firm) was more than twice that of village industrial enterprises (26 workers per firm) and almost equal to that of township enterprises (70 workers per firm) in the north (Ho 1994 p.56).

(3) EDUC

While EDUC was significant in some of the initial regressions at the 10% level (see table 7.2), following the Cochrane-Orcutt transformation it became insignificant. This is a surprising result given that most studies have found that in developing countries there is a strong relationship between education and labour share (see eg Knight & Sabot 1981, Byron & Takahashi 1989). The poor nature of the proxy might be a limiting

factor here restricting the conclusions we can draw, but the result cannot be dismissed just because the proxy is crude. The reason is that other studies, using better data sets, have reached similar results - Gelb (1990), Peng (1992), Gregory & Meng (1995), Meng & Miller (1995), Parish *et al* (1995) and Meng (1996) using firm level data on either T.V.Es or rural enterprises found that education did not have a statistically significant effect on wages. This is also consistent with the finding that just 2% of workers in the World Bank sample believed that education was an important factor in wage determination (reported in Meng 1992).

There are a number of reasons which might explain the result for EDUC. Meng (1996 p.721) puts forward one possible explanation: "In [T.V.Es] many jobs are unskilled and productivity would be the same for all workers in these jobs, regardless of education level". In addition Gregory and Meng (1995 p.359) suggest "education may not be used as a screening device as [T.V.Es] do not usually freely hire workers". In the sample Gregory & Meng (1995) used, at least 40% of workers were assigned to the T.V.E by community authorities, often in pursuit of income distribution objectives across families. If screening devices are marginalised this supports the position, outlined above, that broader communal and firm considerations are more important determinants of workers' share than personal characteristics such as education level.⁵

(4) MALE

MALE was also insignificant. This differs from previous studies. Gelb (1990) and Meng (1992), who used data from the World Bank sample of four counties, both found that gender dummies were statistically significant. Gelb (1990) found that female wages were 14% lower than male wages and Meng (1992), using a different set of independent

variables, found that female wages were 30% lower than male wages when other variables were held constant. Peng (1992), Knight & Song (1993) and Parish *et al* (1995) reached similar conclusions. Using panel data from 1988 on 1670 people working in rural enterprises, Knight & Song (1993) got the same result as Gelb (1990). Using data on ten counties in the central and eastern zones collected in the 1993 Chinese General Social Survey, Parish *et al* (1995) found that female wages in the rural collective sector were about 80% of male wages. Using data from the World Bank sample on just two of the four counties (Wuxi and Jieshou) Peng's (1992) results suggest that women with the same education, experience and tenure earn about 87% of men's earnings.

Given each of these previous studies, there are a few different interpretations that could be put on the results in this exercise. The first is that the results are evidence that there is no wage discrimination against women in T.V.Es. This would sit well with the thesis that personal characteristics have little effect on workers' share, but conclusions along these lines have to be cautious. It has already been pointed out that sex is probably not a good example of a personal characteristic in this sense. A second interpretation is that the results for MALE reflect the poor nature of the proxy. The fact that the results are inconsistent with previous research gives some support to this interpretation. The data sets, used by each of the studies mentioned above, were restricted to T.V.Es in a few select localities so, on one hand, it might be argued that the data set used here is more representative. But on the other the data each of the studies used, at the firm level, is likely to be of a better standard. A third possibility is that the results for MALE reflect the failure to explicitly model occupational segregation. A number of studies for developed countries

(eg Brown *et al* 1990, Miller 1987) and limited studies for developing countries (eg Cohen & House 1993) suggest that it is important to model occupational segregation when measuring male/female wage differences.

It was not possible to do this using aggregate data given there is no breakdown for different occupations. However, Meng & Miller (1995) do this using firm level data on T.V.Es. Their results suggest that when gender wage differences are broken down into inter-occupational and intra-occupational sources women earn about 20% less than men in T.V.Es. Also, when drawing conclusions, it should also be borne in mind that the finding here that there is no wage discrimination is inconsistent with a wealth of literature documenting wage discrimination in the wider labour market (see eg Byron & Manaloto 1990, Huang 1995, Zhao 1995). This does not mean that the result for MALE should be disregarded, but it does suggest that the result needs to be viewed with some caution.

(5) ECONOMIC

The economic variable was not significant. It was suggested earlier that if there was a close relationship between workers' share and economic performance we might expect ECONOMIC to be significant with a negative sign. The reason for this expectation was the common practice among traditional T.V.Es to reduce wages and/or shut down for a short period in times of economic hardship. There are a few possible explanations for the fact that ECONOMIC is not significant. The first is that workers' share is not related to economic performance at all. As a blanket statement this seems unlikely given the performance of the PROFIT variable. A second possible explanation is that in times of economic hardship workers' share could be falling slower than the profit rate which implies that the ratio wages/profit is increasing. This explanation would be consistent with the

existence of a segmented labour market between local and immigrant labour. Thus, in times of economic downturn, T.V.Es might lay off immigrant workers, but retain local workers at similar wage levels.

A third possibility is that given the nature of the proxy, it is being dominated by region specific factors in the coastal/suburban provinces. The highest proportion of loss-making T.V.Es are concentrated among the larger firms in the suburban and coastal provinces and often these T.V.Es do not behave as traditional T.V.Es. There is little or no evidence, at the level of casual empiricism, of the close understanding between management and worker in these T.V.Es, or the communal basis, that allows traditional T.V.Es to often make subsistence payments in times of economic difficulties. These sorts of informal labour arrangements common in traditional T.V.Es, consistent with the model in the last chapter, give way to formal labour contracts which are more in line with the A-mode in the developed coastal areas. This explanation would also be consistent with the results for both SIZE and the regional dummies.

THE COEFFICIENT OF DETERMINATION

The adjusted coefficient of determination, in the Cochrane-Orcutt transformation was .34. While this is a disappointing result, it is perhaps not surprising. It might be tempting to put it down to the crude nature of some of the proxies. This might have something to do with it, but there seems to be more to it. Other studies running similar regressions using data on T.V.Es have also got low values for the adjusted coefficient of determination. For example Peng (1992), Knight & Song (1993), Gregory & Meng (1995), Meng & Miller (1995) and Meng (1996) run regressions using firm level data where the dependent variable is the wage rate and there are independent variables measuring factors such as human capital

(age, education) firm tenure and job experience. A number of different specifications are used over these articles - for example log-linear, natural log of the dependent variable, logit and probit. The values for the adjusted coefficient of determination in each case were around .2 to .4.

In addition Gelb (1990) got similar results in initial regressions. While the actual results are not given, Gelb (1990 endnote 3) reports that in a regression where the link between wages and PROFIT was tested using occupational dummies "although many of the variables [were] significant [the adjusted coefficient of determination was] only .10". The value for the adjusted coefficient of determination in Gelb's regressions only started to rise when a range of other independent variables were included. These were variables for education, experience, sex, number of days worked and occupational breakdown (shift or group leader, operations personnel technical adviser etc.). When all of these independent variables were included the adjusted coefficient of determination increased to .7.

This suggests that there might be other factors affecting workers' share which would lift the overall variance explained, but this is difficult to confirm or reject at an aggregate level. Of the variables Gelb added, putting aside possible problems with the proxies, it seems that education and sex do not explain any of the overall variance in workers' share. The adjusted coefficient of determination when the insignificant variables were omitted (regression (ii) in table 7.4) was also .34. As for the other variables (experience, days worked etc), given data limitations, there are no reasonable proxies at an aggregate level which can be used. A point to note is that PROFIT was significant in each of Gelb's regressions regardless of the other variables added. The high t value for profit in table 7.4 suggests that this is also likely to be the case if other variables

were added in this regression. However, in the absence of further regressions with added variables (and thus better data) we can't rule out the possibility that PROFIT and SIZE are correcting for other variables.⁶

7.3 THE RELATIONSHIP BETWEEN T.V.G INFLUENCE AND WORKER SOCIALISATION

The Specifications

The relationship between T.V.G influence and worker socialisation was tested using two separate regressions. The specifications which were used are:

$$\ln(\text{SOCIAL}) = a + b_1 \text{T.V.G} + b_2 \text{PROFIT} + b_3 \text{SIZE} + b_4 \text{RE} \quad (1) \quad \text{and}$$

$$\ln(\text{SOCIAL}) = a + b_1 \text{T.V.G} + b_2 \text{PROFIT} + b_3 \text{SIZE} + b_4 \text{IMM} + b_5 \text{RE} \quad (2) \quad \text{where:}$$

SOCIAL measures worker socialisation,

T.V.G is a measure of T.V.G influence,

PROFIT is a measure of the T.V.E's profit rates,

SIZE is a measure of the T.V.E's size,

IMM is a measure of immigrant labour and

RE is a vector of regional dummies

The first specification was tested using pooled data on T.V.Es as a whole for the period 1989-1991. The second was tested using data on industrial T.V.Es for 1987. The data that were available dictated this. First, the proxies used for SOCIAL and T.V.G were available for industrial T.V.Es for 1987 and for T.V.Es, as a whole, for 1989-1991, but were not available at all in other years. Second, data on inter-provincial migration was available for 1982-1987, but consistent data on inter-provincial migration was not available for 1989-1991. The construction and limitations of the proxies in each instance are discussed below.

dependent variable:

SOCIAL

SOCIAL is a measure of worker socialisation. SOCIAL, ideally,

measures the extent to which workers identify with the objectives of the firm or the degree to which workers are prepared to accept responsibilities for others' work. The problem is, however, that it is difficult to measure the extent to which workers identify with their firm, at least in a direct fashion, using aggregate data. Therefore the importance of broader communal objectives relative to material reward was used to depict the degree of socialisation. The proxy used for this was remittance to the township-village/total wage bill. The remittance to the township-village captures the importance of broader communal aims. This is because most of the remittance to the township-village is used to finance communal social programs (such as collective welfare and education) and infrastructure projects (such as road and irrigation construction) in the township-village. The total wage bill reflects the importance of material reward. To this extent, it might be argued that the measure remittance to the township-village/total wage bill reflects the importance of social/communal values in the township-village more than it does in the T.V.E *per se*. Nonetheless, given the communal basis of T.V.Es, the objectives of the T.V.E tend to coincide with, or at least complement, the broad communal aims of the T.V.G. The proxy was constructed from data in *Zhongguo Xiangzhen Qiye Nianjian* (various volumes). However, as pointed out above, a problem is that consistent data for remittance to the township-village are limited. The data were available for industrial T.V.Es for 1987 and for total T.V.Es for the period 1989 to 1991.

independent variables

(1) T.V.G

T.V.G is a measure of the importance of the T.V.G in the contracts into which the T.V.E enters. T.V.G attempts to measure the extent

to which T.V.G influence is acting as a surrogate in the absence of formal contracts and/or as a monitor on the evolution of collective norms. The proxy used is the ratio of T.V.E bank credit to external financing. This was constructed from data in *Zhongguo Xiangzhen Qiye Nianjian* (various volumes). The data, like SOCIAL, were available for industrial T.V.Es for 1987 and for T.V.Es. as a whole, for 1989 to 1991. The rationale for this proxy is that the ratio bank credit/external financing is dependent on the T.V.G's role as guarantor. The legal rights of creditors are not well protected. Therefore, it is common for T.V.Es to borrow on the basis of a guarantee from the T.V.G (see section 5.2). However, the usual practice is that the actual guarantee is not formalised. The process is, instead, consultative where the lending institution seeks the T.V.G's views and priorities. The reputation of the T.V.G for meeting the T.V.E's obligations in the event of default is an important reference point in this respect. If the T.V.G supports the T.V.E's application for credit, the usual practice is for the lending institution to approve it on the implicit understanding that the T.V.G will absorb the risk. The reasoning is, the higher the ratio bank credit/external financing the more important the role of the T.V.G.

(2) PROFIT

PROFIT was constructed in the same manner as discussed in section 7.2. The source for the data used is also the same. Both proxies for PROFIT were used - total (pre-tax) profit per 1000 yuan

revenue and total (pre-tax) profit per 1000 yuan fixed assets - and the results for both are presented. PROFIT and SIZE are both included as region specific variables designed to pick up systematic variations not captured in T.V.G. PROFIT is intended to pick up the potential effect which variations in profit rate between provinces might be having on worker socialisation - ie it measures the impact of having a number of profitable T.V.Es in the province.

(3) SIZE

The discussion about SIZE in section 7.2 also applies here. Two proxies for SIZE were used in most of the regressions - total workers/total number of firms and total revenue/total number of firms. SIZE, as a region specific variable, complements the role of PROFIT - ie it captures the effect of variations in the T.V.E's size.

(4) IMM

IMM measures the impact of immigrant labour on worker socialisation (immigrant labour, in this sense, refers to labour from outside the province). One estimate is that the number of migrant workers in China is over 100 million.⁷ There are no data available, at an aggregate level, on the proportion of immigrant labour working in T.V.Es. Therefore a proxy at the provincial level was used - the number of immigrants per 1000 population. The data on inter-provincial migration are from The Institute of Developing Economies *Population Policy and Vital Statistics in China* and data on

population are from *The China Statistical Yearbook*. The data on inter-provincial migration in *Population Policy and Vital Statistics in China* are for 1982-1987 as a block. Therefore, as mentioned above, cross sectional data on industrial T.V.Es, for 1987, were used to test the second model. IMM could not be used in the first model because most of the time there was no data at all on inter-provincial migration and where there was data it was not consistent over the period 1989-1991. There is a possible limitation on using the number of immigrants per 1000 population as a proxy for the proportion of immigrant labour working in T.V.Es. The implicit assumption is that the former is an accurate reflection of the latter. At best, there will be an approximate relationship between the two, but this assumption seems reasonable. The reason is that both documentation (eg Ho 1994) and casual empiricism suggest that provinces, like Jiangsu, which have a high immigrant population also have a high proportion of immigrants working in T.V.Es..

Prior Expectations

The model, in chapter five, raised the idea that the T.V.G might be acting as a solution to the second order problem of free riding on collective norms and/or as a *de facto* surrogate for the socialisation process. It was suggested that if this is the case, giving the control rights to the T.V.G might make it easier for the T.V.G to monitor the flow of information about collective behaviour within an informal regional framework. It was also suggested that a shift in control rights to the T.V.E manager and skilled workers over time might represent a progression in the socialisation process. The argument was that as the soft trading culture becomes embedded in the social environment, the role of the T.V.G as a point of reference for external contractors might diminish. If this argument is valid and if the proxies for worker socialisation and the T.V.G are reasonable surrogates for

these variables we would expect T.V.G to be significant with a negative sign. As broader communal objectives increase in importance relative to material reward (the dependent ratio increases) we would expect the role of the T.V.G as a monitor on this process and as a point of reference to diminish in importance.

The expected signs on PROFIT and SIZE are ambiguous - ie there is no *a priori* expectation about the effects of variation in profit levels and size on theoretical grounds. However, in the second specification, we might expect IMM to be significant with a negative sign. The first reason is that immigrant workers, in most instances, do not receive the local welfare benefits from remittance to the township-village such as collective welfare, education etc.⁸ The second reason is that immigrant workers in T.V.Es are from different regions and, therefore, do not share the local social values which are the basis for collective norms and co-operative culture. Thus, if remittance to the township-village captures the relative importance of communal values we might expect these to be undermined in T.V.Es with a high proportion of immigrant labour - ie. we would expect immigrant labour to have an adverse effect on worker socialisation.⁹

The Results

The initial results, using pooled data from 1989-1991 for T.V.Es as a whole, are presented in table 7.7. Both proxies for PROFIT (Total Profit per 1000 Yuan Revenue & Total Profit per 1000 Yuan Fixed Assets) and proxies for SIZE (Average Number of Workers per Firm & Average Revenue) are significant at the 1% level. The regional dummies suggest that *ceteris paribus* the ratio remittance to the township-village/total wage bill is higher in the eastern zone than the central and western zones. The adjusted coefficient of determination varies between .34 and .60, depending on the proxies used for PROFIT and SIZE. The Durbin-Watson statistic, in each case, is such that $d > d_u$ so H_0 ($\rho=0$) is not rejected at the 5% level. The results of various diagnostic tests on each

TABLE 7.7**Regression Results For Total T.V.Es - All Provinces 1989-1991**The dependent variable is $\ln(\text{Remittance to Township or Village/ Total Wage Bill})$

<u>independent variables</u>	(1)	(2)	(3)	(4)
1. Ratio of Bank Credit to External Financing	-.08 (.94)	-.07 (.79)	-.05 (.78)	-.05 (.66)
2. Total Profit/Total Revenue	.36 (4.22)	.36 (3.94)	NE	NE
3. Total Profit/Gross Fixed Assets	NE	NE	.57 (7.55)	.61 (7.45)
4. Average Number of Workers per firm	-.51 (6.01)	NE	-.36 (4.76)	NE
5. Average Revenue per Firm	NE	-.41 (4.47)	NE	-.25 (3.10)
6. D-CENTRAL	-.41 (5.98)	-.65 (4.87)	-1.02 (4.77)	-.98 (2.65)
7. D-WESTERN	-1.65 (4.34)	-1.45 (6.28)	-1.43 (2.98)	-.54 (.80)
DW	1.61	1.63	1.56	1.59
Adjusted co-efficient of Determination	.45	.34	.60	.54

NOTE:

(1) The number of cases was 84 (pooled data on 28 provinces - Hainan & Tibet were excluded - for 1989-1991 inclusive. For the provinces in each zone see tables 7.2 and 7.3. (2) The figures in parenthesis are t statistics. (3) NE denotes that the proxy was not used in the regression. (5) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

regression in table 7.7 suggest that neither multicollinearity nor heteroscedasticity presents problems for the sample,¹⁰ but the disappointing aspect of the results is that T.V.G is not significant in any of the four regressions.

A possible reason for the poor performance of T.V.G seemed to be that the scope of the initial regressions might be too wide. The initial results suggest that the notion that T.V.Gs might be acting as *de facto* surrogates in the socialisation process is not a concept which applies to all T.V.Es across all provinces. To test whether the argument had more limited application the regressions were rerun on selected provinces for 1989-1991. The selected provinces were the eight provinces with the highest T.V.E output value in the eastern, central and western zones in 1994. The provinces included were: eastern - Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong and Guangdong; central - Shanxi, Inner Mongolia, Jilin, Anhui, Jiangxi, Henan, Hubei and Hunan; and western - Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. While not absolute these provinces provide wide coverage in terms of both numbers (24 provinces, 72 cases) and level of economic development.

The results for the second series of regressions are presented in table 7.8. The results are similar to the regressions in table 7.7, but there are a couple of differences. The proxies for PROFIT and SIZE continue to be significant at 1%. T.V.G remains insignificant when total profit per 1000 yuan revenue is used, but is significant at 10% when total profit per 1000 yuan fixed assets is entered for PROFIT. The adjusted coefficient of determination also a little higher in three out of four of the regressions. A possible reason for this is that the provinces with the smallest T.V.E output value were outliers adversely affecting the initial results.¹¹ The Durbin-Watson statistic indicated that serial correlation is not a problem. The various diagnostic tests also suggested that neither multicollinearity nor heteroscedasticity appears to be influencing the results.¹²

TABLE 7.8
Regression Results For Total T.V.Es - Selected Provinces 1989-1991
 The dependent variable is $\ln(\text{Remittance to Township or Village/ Total Wage Bill})$

<u>independent variables</u>	(1)	(2)	(3)	(4)
1. Ratio of Bank Credit to External Financing	-.11 (1.27)	-.10 (1.09)	-.13 (1.82)	-.13 (1.67)
2. Total Profit/Total Revenue	.36 (4.00)	.37 (3.76)	NE	NE
3. Total Profit/Gross Fixed Assets	NE	NE	.61 (7.84)	.65 (7.85)
4. Average Number of Workers per firm	-.51 (5.74)	NE	-.34 (4.39)	NE
5. Average Revenue per Firm	NE	-.41 (4.21)	NE	-.23 (2.81)
6. D-CENTRAL	-.38 (6.01)	-.53 (4.92)	-1.48 (4.66)	-1.21 (2.63)
7. D-WESTERN	-1.42 (4.21)	-1.45 (6.22)	-1.44 (3.03)	-1.01 (2.02)
DW	1.60	1.57	1.64	1.62
Adjusted co-efficient of Determination	.45	.35	.64	.59

NOTE:

(1) The number of cases was 72 (pooled data on 24 provinces for 1989-1991 inclusive). The provinces included were the 8 with the highest T.V.E output value, in each of the three official development regions - eastern, central and western- in 1994. The provinces included were: eastern - Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong and Guangdong; central - Shanxi, Inner Mongolia, Jilin, Anhui, Jiangxi, Henan, Hubei and Hunan; western - Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang (2) t statistics are in parenthesis (3) NE denotes that the proxy was not used in the regression. (4) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

TABLE 7.9
Regression Results For Industrial T.V.Es - Selected Provinces 1987
 The dependent variable is $\ln(\text{Remittance to Township or Village/ Total Wage Bill})$

<u>independent variables</u>	(1)	(2)	(3)	(4)
1. Ratio of Bank Credit to External Financing	-.24 (-1.87)	-.28 (-1.59)	-.27 (-2.20)	-.32 (-1.99)
2. Proportion of Immigrant Labour in the Province	.83 (4.13)	NE	.76 (3.60)	NE
3. Total Profit/Gross Fixed Assets	.45 (2.65)	.67 (2.94)	NE	NE
4. Total Profit/Total Revenue	NE	NE	.35 (2.74)	.54 (3.58)
5. Average Number of Workers per firm	-.59 (-2.93)	-.10 (-.42)	-.29 (-1.46)	.26 (1.61)
6. D-CENTRAL	-.53 (2.76)	-.43 (3.09)	-.96 (4.99)	-.42 (2.98)
7. D-WESTERN	-1.53 (3.11)	-1.41 (2.88)	-1.22 (6.23)	-.38 (2.87)
Adjusted co-efficient of Determination	.76	.51	.76	.58

NOTE:

(1) The number of cases was 24. To facilitate comparison with the results in table 7.8 the provinces included were the 8 with the highest T.V.E output value, in each of the three official development regions - eastern, central and western- in 1994. See notes to table 7.8 for the provinces included. (2) t statistics are in parenthesis (3) NE denotes that the proxy was not used. (4) D-CENTRAL and D-WESTERN are regional dummies for provinces in the central and western zones respectively. Provinces in the eastern zone were treated as the reference group.

The results for the second model, using cross-sectional data on industrial T.V.Es in 1987, are presented in table 7.9. Given the results using pooled data, the data set was restricted to the same 24 provinces that were used in the second series of regressions. Two regressions were run including IMM and, in order to facilitate comparison with the results in table 7.8, two regressions were run excluding IMM. The results for both proxies of PROFIT are presented but, because of data limitations, the only proxy used for SIZE was total workers/total number of firms. The proxies for PROFIT are significant, at 1% or 5%, in each regression. SIZE is significant in two of the four regressions, but the signs differ. IMM is significant at 1%, but has a positive sign. T.V.G is significant in three of the four regressions, at the 10% level, with the expected negative sign. The adjusted coefficient of determination is .51 and .58 in the two regressions where IMM was excluded and it increased to .76 when IMM was included. The pairwise correlation between IMM and SIZE, in the two regressions including IMM, is high, but the tests for multicollinearity, as a whole, and the Goldfeld-Quandt test for heteroscedasticity suggest that neither is affecting the results.¹³

INTERPRETATION OF THE RESULTS

There are some differences between the results (eg. T.V.G is significant in some regressions and not others), but the results for most of the variables (eg. PROFIT) are consistent throughout regardless of specification and regardless of whether the data set is for industrial T.V.Es or T.V.Es as a whole. This subsection discusses the performance of specific variables and elaborates on some reasons for the results in the light of prior expectations and data problems.

(1) T.V.G

T.V.G was not significant when all provinces were included in the data set. However, T.V.G was significant, with the expected sign, in two of the four regressions using pooled data for selected provinces. T.V.G was also

significant, with a negative sign, in three of the four regressions using cross-sectional data on industrial T.V.Es for selected provinces. These results give at least some support to the argument that the role of the T.V.G diminishes with progression in worker socialisation, but it is qualified. The initial results, presented in table 7.7, suggest that the argument is not applicable to all T.V.Es across all provinces. This, perhaps, should not be surprising, given that it is difficult to take account of regional variations in T.V.Es across provinces. These results, nevertheless, have to be seen in light of the limitations of the dependent variable. The dependent variable purports to be a measure of socialisation. The reasons behind this interpretation of the proxy are discussed above, but there is also another interpretation. The other interpretation is that remittance to the township-village is dependent on profits so that the dependent variable is, in fact, a measure of profit share. The results for PROFIT give some support to this interpretation. The evidence on the relationship between debt financing and profit share in socialist economies is, on this point, speculative, but if the experience of western market economies carries over we might expect T.V.G to have a positive sign. A possible reason for the poor results for T.V.G, in the initial regressions, therefore, is that the two interpretations (the two effects) - ie worker socialisation and profit share - might be cancelling each other out.

(2) SIZE

Both proxies for SIZE are significant at 1% with a negative sign in both series of regressions using pooled data on T.V.Es as a whole. This seems a reasonable result. The argument relating to socialisation applies to, on the whole, small communal based T.V.Es. The result is consistent with the observation that in the larger T.V.Es, in the coastal provinces, broader communal considerations are less important. The result is also consistent with the observation that the detailed division of labour is more prominent than the social division of labour as a method of coordination in these T.V.Es. The results for T.V.Es as a whole

contrast with the results for industrial T.V.Es. The only proxy used in the regressions on industrial T.V.Es was the average number of workers. The results for SIZE, in these regressions, were mixed. SIZE was insignificant in three of the regressions and in the other regression was significant at 5% with a negative sign. These are difficult results to explain. There does not seem to be any *a priori* reason why the results for industrial T.V.Es should be different from T.V.Es as a whole on this point. However, taking into account the consistent and robust results for T.V.Es as a whole and given the small number of cases in the cross-sectional sample the results for industrial T.V.Es might be due to some anomalies in the data. There is, nevertheless, no clear evidence on this issue.

(3) PROFIT

Both proxies for PROFIT have a positive sign and are significant at 1% in each regression. This is irrespective of the data set or specification. This result also holds for both industrial T.V.Es and T.V.Es as a whole. This is a robust result, but what we can read into this depends on the underpinning reasons for it. There seem to be two possible explanations. The first is that worker socialisation is more prominent in profitable firms. The second is that remittance to the township-village is higher in profitable firms because it is a function of profit rather than being indicative of workers in more profitable firms having a greater social awareness *per se*. The fact that remittance to the township-village is a function of profit is well known and has been recognised in other research (see eg. Gelb 1990 pp.294-295). However, if the reason for the results for PROFIT rest with the second explanation what we can learn from the results about the relationship between profit and socialisation might be limited.

The problem is that the result for PROFIT, while reasonable, might be due to the construction of the dependent variable rather than the perceived relationship between profit and worker socialisation. The fact that remittance to the

township-village is a function of profit and the notion that worker socialisation is more prominent in more profitable firms, of course, need not be inconsistent. Nevertheless the second explanation needs to be borne in mind when considering the results. The results for the regional dummies also suggest a need for caution in interpreting PROFIT. One interpretation on the results for the regional dummies is that in the eastern zone control rights have shifted to managers and skilled workers in T.V.Es as a progression in the socialisation process. However, this interpretation seems inconsistent with the explanation of the results for SIZE - in particular the argument that socialisation is likely to be higher in smaller communal based T.V.Es which tend to predominate in the interior provinces. Hence a more plausible explanation is that the results for the regional dummies reflect the well known observation that T.V.Es in the eastern zone are generally more profitable than T.V.Es in the other two zones.

(4) IMM

IMM was included in two of the regressions using cross-sectional data. IMM has a positive sign and is significant at the 1% level. This differs from prior expectations which was that IMM would have a negative sign. A possible explanation for the results might rest with the construction of the dependent variable. The reason is that there is evidence, in the wider labour market, to suggest that immigrant labour are paid lower wages (see eg Davin & Messkoub 1990, *The Economist* July 6 1996 p.72). If the position in the wider labour market reflects the situation in T.V.Es, provinces with a higher proportion of immigrant labour will have a lower workers' share. The evidence at the level of casual observation suggests that this is the case, but if the result for IMM is due to limitations on the dependent variable, the implications that we can draw about the impact immigrant labour has on worker socialisation into the firm are limited.

7.4 SOME GENERAL COMMENTS AND CONCLUSION

Before making some general comments about the implications of the results for the earlier theoretical part of the thesis a few words about their limitations are needed. First, the regressions are ad hoc. The regressions, therefore, do not provide a direct test for either of the theoretical models. The reason for this, as stated at the start of the chapter, is that the data were not available to construct reasonable proxies. Second, the regressions focus on the more narrow argument put forward in previous chapters - ie. the explanation for T.V.E behaviour and the proposed similarities between the T.V.E and the J-mode. The regressions do not provide empirical verification for the broader argument, in earlier chapters, that T.V.Es are a specific example of regionalism and, as such, contain lessons for the transition path in Eastern Europe. Third, some of the proxies used are crude. This makes it difficult to give a definitive interpretation of some of the results - for example IMM in the second series of regressions. Thus, on this basis, the conclusions that we can draw from the results are tentative and subject to reconsideration with better data sets at the firm level.

However, in spite of the limitations of some of the proxies, the results give at least some support to the earlier theoretical arguments. This is a pleasing result given data limitations and the ambitious nature of the second set of regressions.

- (i) The finding in the first set of regressions that there is a strong relationship between profit rate and workers' share is strong evidence that the T.V.E comes close to the J-mode. The results for PROFIT are consistent with previous empirical work (see eg. Nakatani 1984 pp.235-236) on the relationship between workers' share and profit rate in the J-mode. This result, in itself, is not empirical verification for the wider argument that there are similarities between the external contracts of the

T.V.E and the J-mode. However, at a level which is able to be tested, the results are suggestive of strong similarities between the T.V.E and J-mode. This supports the theoretical arguments made in earlier chapters.

- (ii) The results for SIZE, in both sets of regressions, are important. The results for SIZE, when both sets of regressions are considered together, suggests that in larger T.V.Es (a) workers' share tends to be more market determined meaning communal considerations are less important (b) the detailed division of labour increases in importance relative to the social division of labour. This does not provide direct verification for the formal arguments developed in the last chapter. However this proposition is both consistent with, and supportive of, the main idea - in particular that a trade-off exists between the social division of labour, which predominates in smaller communal oriented T.V.Es and the detailed division of labour, which is dominant in the larger market oriented T.V.Es.

- (iii) The results for T.V.G are far from conclusive. This is due, perhaps, more to the speculative nature of the dependent variable than the underpinning arguments. The results, nevertheless, give some support to the suggestion that, in the main T.V.E provinces, the T.V.G is acting as a surrogate in the socialisation process and/or as a monitor on collective norms and that the role of the T.V.G diminishes with worker socialisation. With respect to the broader implications for the theoretical arguments, this proposition was not central to the concept of a regional network. The distinction between soft and hard contracting was the basis of this argument. Therefore, it follows that to provide some empirical support on the T.V.G-worker socialisation relationship does not, in itself, provide empirical verification for the wider argument that a regional network explains T.V.E development. However, the relationship between the role

of the T.V.G and the socialisation process is important to two sub-themes in the wider argument. The first is the explanation for shifting control rights over time - ie. the control rights shift from the T.V.G to the manager and skilled workers with a progression in socialisation. The second is that the T.V.G performs a dual role of the political entrepreneur. The T.V.G monitors the evolution of collective norms and with an increase in collective or social consciousness the role of the T.V.G diminishes.

CHAPTER 8

SOME BROAD LESSONS AND GENERAL IMPLICATIONS

8.1 INTRODUCTION

The last four chapters have focused on T.V.Es, in the main, in isolation from the wider debate. This chapter explores some possible lessons for the wider literature. There are two main differences, however, between this chapter and the previous literature exploring similar themes. First, the chapter is restricted to issues which T.V.Es in general, and the models in chapters five and six in particular, raise for post-socialist transformation. This is narrower than the previous comparative literature which has focused on the possible lessons from the reforms as a whole (eg Lee 1994, Naughton 1994b). The theoretical framework does not exist in this thesis to consider the potential relevance of the wider reforms, hence a broader perspective lies outside the scope of this thesis. Second, the lessons which I suggest we can learn from T.V.Es raise issues about the theoretical framework of the debate on post-socialist transition, rather than suggesting particular policies in different countries. This differs from previous articles which focus on possible lessons for the mechanics of reform, rather than the reform process (eg McMillan & Naughton 1992, Chen *et al* 1992).

The method of reasoning, in this chapter, will be that T.V.Es show that certain features are important and/or feasible, *therefore* these features might also be important and/or feasible in the transformation process in other economies. The tone, however, is cautious, for a few reasons. First, to be more conclusive the thesis would need to provide a more comprehensive framework to consider post-socialist transformation. This would entail more detailed consideration of the circumstances which exist in specific countries. The treatment of issues facing specific countries in this thesis, though, other than China, has been negligible. Second, the reforms, in Eastern Europe, have not been in place for a sufficient

period to be more conclusive. The results are suggestive, but the empirical evidence does not exist to make absolute judgments about the merits of the different strategies. Third, it is premature to conclude that T.V.Es, in the end, will prove successful. This thesis has tried to emphasise that less than arms-length relationships contain some positive features in terms of productive efficiency, but there are also costs, such as interference in managerial decisions (see chapter four) which impinge on allocative efficiency. Moreover, the performance of T.V.Es to this point has been exceptional, but it is impossible to be certain whether the problems T.V.Es have will change this in the future.

The rest of the chapter is set out as follows. The possible lessons which I suggest T.V.Es contain for post-socialist transformation are listed in the next section. There is some discussion about T.V.Es in general, but where possible, reference is made to the main arguments and/or conclusions in the two theoretical models in chapters five and six. There are four main lessons. The first is that path dependence is a relevant consideration. The second is that more than one organisational form is feasible. The third is that it is possible to experiment with different organisational forms and still end up with *ex post* coherent reforms. The fourth is that economic progress is possible without privatisation. The implications of these lessons for post-socialist transformation, in general, are discussed in section 8.3. The strands of a different framework for considering the post-socialist transformation process are explored in section 8.4. The framework builds on the concept of a broader new regionalism, which was first explored in chapter five, to suggest at least the basis of an alternative perspective stressing differences between specific (post) socialist countries.

8.2 POSSIBLE LESSONS

(i) *Lesson one - Path Dependence is a Relevant Consideration*

The theoretical model in chapter five, in a broad sense, stresses that T.V.Es did not evolve in a vacuum. The contractual environment, or the social, institutional

and organisational context in which contracts are embedded played a role. Two factors, in particular, which are path dependent, were important in the explanation. The first was pre-existing socialist institutions. The model stressed the role of the cadre-entrepreneur as a vehicle to solve collective action problems that build up around informal institutions. If this argument is valid, the mechanics which underpin the success of T.V.Es lie with socialist political heritage. The second was the social component of contracting. The importance of clan forms, in local contracting, is the out growth of communal ties which extend back centuries.¹ T.V.Es seem to be successful because the potential for both of these path dependent factors was explored. This differs from the transition path in many other socialist and post-socialist countries where (i) factors such as pre-existing socialist institutions are often viewed as impediments rather than vehicles for reform, and (ii) the potential for different forms of governance structures founded on social embeddedness tend to be overlooked. The success T.V.Es have had suggests that a different attitude to these factors might open up the potential for different organisational forms.

(ii) *Lesson two - More than One Organisational Form is Feasible*

At one level, there is a significant range of ownership varieties in China. The different sorts of ownership structures are given in table 8.1. The state-owned sector has enterprises at the central, provincial and local level. Most of the state-owned sector in contrast to Eastern Europe, is controlled at sub-central levels. However, the most diverse range of organisational forms is in the non-state sector which has a mix of private and public enterprises. It includes *inter alia* T.V.Es, "individuals" (private firms with fewer than eight workers) and "others" (private firms with more than eight workers, joint ventures, foreign owned ventures, joint stock companies etc). The success, to this point, of the wider reforms seems to suggest that post-socialist transformation can be consistent with a diverse range of ownership forms. While it is a debatable point

TABLE 8.1
TYPES OF ENTERPRISE OWNERSHIP IN CHINA

Area	State-Owned Enterprises	Non-State-Owned Enterprises			
		Collectives	Individual		Others
	Public Enterprises	Private Enterprises			
	Controlled by				
Urban	Central, Provincial, City and Country Governments	District and Neighbourhood Enterprises	Urban Co-operatives	Urban Individual	Private; joint-stock; joint ventures
	Rural	n/a	Rural Enterprises		
		T.V.Es	Rural Co-operatives	Rural Individual	

SOURCE: Based on Qian (1995) Table 7.1

some go further than this and suggest that plural ownership has been integral to the broader reforms. For example Qian (1995 pp.238-250), in passing, argues that: "diversity has value because the kind of enterprise reforms ... in China are unprecedented and must encompass a wide range of experiments. ... In property rights and enterprise reforms, China needs *diversity*. In this sense the most dangerous reform strategy is to insist on a single organisational model for all enterprises in the country" (emphasis in original). Amsden *et al* (1996) point out that diverse ownership forms in China have complemented each other:

"Whereas transition strategy in Eastern Europe has emphasised the demise of state-owned firms alongside the rise of private enterprises, new and old forms of property in China have been reformed interactively (whether by design or default). Typically collectively-owned T.V.Es have

received their technology, equipment, intermediate inputs and often final demand from state-owned firms. To increase their profits, state-owned firms have invested directly in T.V.Es" (Amsden *et al* 1996 p.277).²

These comments relate to the reforms in general, but the models in chapters five and six suggest that different organisational forms have also evolved in T.V.Es. The traditional T.V.E, with close ties to the T.V.G, resembles the clan form with a strong communal basis. The larger coastal and urban T.V.Es are hierarchical where emphasis is on vertical information flows aimed at maximising economies of specialisation. The model, in chapter six, explored some of the trade-offs between different methods of coordination. The model suggests, at a conceptual level, that post-socialist transformation is consistent with more than one organisational form. The potential exists for organisations which are based on horizontal and vertical information flows. The main arguments, in chapter six, build on, and are consistent with, Aoki's treatment of the trade-offs between the J-mode and the A-mode. When the J-mode is seen as one strand in a broader collective learning theme embracing *inter alia*, the flexible specialisation and techno-economic paradigms, a basis exists for generalising the notion that different organisational forms might be feasible in other (post) socialist countries.

(iii) *Lesson three - Ex post Organisational Coherence is Possible*

(Murrell 1992c p.3) suggests that "the Chinese reforms began, not with a grand plan on the part of the leadership, but rather with the leaders validating and spreading experiments that had been conducted under the initiative of the leadership of some localities". This is reflected in the slogan: China should adopt 'pick-ism' (*nalai zhuyi*), *ie.* it should adopt bits from different models that are useful (*Inside China Mainland* March 1993 pp.21-27). This approach

characterises the evolution of T.V.Es. Wong (1991), among others, argues that the development of T.V.Es was due to deliberate state promotion. While T.V.Es, at times, have been restricted to certain industries, as a general observation this is true. However, the actual institutional characteristics or organisational form of T.V.Es is a different matter. The emergence of the particular institutional features of T.V.Es were not planned, but were, to a large degree, the outgrowth of government vacillation. Nonetheless, the reforms *ex post* seem coherent. The model, in chapter six, suggests that T.V.Es have developed a dual character consisting of (i) a core of strategic alliances based on informal exchange and (ii) an extended sector where formal exchange is predominant. This is similar to the J-mode - which is an advanced capitalist form - but it was never planned. Sachs (1991), arguing from a big bang perspective, posits that there is no time for experimentation, because if privatisation is not rapid, the economic gains from transition to the market will be lost, but the success which T.V.Es have had seems to suggest that it is possible to experiment with different organisational forms and still end up with *ex post* coherent reforms. Moreover, T.V.Es show that experimentation can be compatible with high rates of growth.

(iv) *Lesson four - Economic Progress is Possible Without Privatisation*

A fourth possible lesson is that significant progress in industrialisation can be feasible without privatisation. T.V.Es were not planned, but were spontaneous initiatives at the local level. For example Oi (1995 p.1148) argues: "The success of local governments as entrepreneurs suggests that privatisation is not the only way to stimulate economic growth." Nolan (1995 p.222) elaborates on this view:

"China's experience shows that community ownership can be an effective way of overcoming market failure for an important segment of the rural non-farm sector. Privatisation proved to be an unimportant part of the explanation for the accelerated growth of this sector. ... China's local

authorities were able, in most areas, to generate revenue from the rural non-farm sector so that they were in a better position than might have been the case with privatised small businesses to undertake community welfare expenditures of benefit to ... the whole local community”.

Thus, given the large number of socialist and post-socialist economies attempting market reform and economic development, T.V.Es stand as a less radical and viable alternative to privatisation. However, the suggestion that progress is possible without privatisation is, perhaps, the most controversial of the proposed lessons. While T.V.Es have done well without privatisation, the performance of the state-owned sector and whether privatisation of S.O.Es is a pre-requisite for further growth is debatable. Moderate economists such as Chen *et al* (1992 p.222) suggest that “privatising state enterprises [is] not essential for the near and mid-term success of [China's] industrial reform program. Expanding managerial autonomy and incentives ... have, to a substantial degree, substituted for the privatisation of state enterprises”. In contrast, the advocates of big bang argue that S.O.Es have not performed well and are not reformable (see eg Lipton & Sachs 1990, Sachs & Woo 1994, Woo 1994). The issues are clouded due to difficulties with measuring performance (see section 2.3). Moreover, while T.V.Es have performed well so far, as stressed in the first section, it is impossible to state for certain whether this will continue without clarification of existing “ambiguous” institutional arrangements.

8.3 RELEVANCE TO OTHER TRANSFORMING ECONOMIES

Most (but not all) would accept that T.V.Es show that each of the above propositions is *possible*. The more contentious issue is whether the lessons are relevant to the wider debate (ie. is it possible for other countries to achieve similar results if each lesson is followed). Two points are important when

considering the possible lessons for other socialist and post-socialist economies. The first is that the object is not to set up a comprehensive blueprint as an alternative to big bang. The point, rather, is that a blueprint might not be possible. In chapter five the broader argument was that T.V.Es are a specific example of a new regionalism which emphasises the individual features of different economies. This idea stresses that the transformation paths in various socialist and post-socialist economies differ. The second point, which follows from the first, is that T.V.Es can contain lessons for post-socialist transformation in other countries, without other countries replicating the T.V.Es' institutions. In this respect the possible lessons lie in the process rather than the mechanics of reform. The institutional features of T.V.Es are specific, but the idea that institutional specific characteristics, which differ between countries, can be developed is general. T.V.Es seem to show that it is possible for individual countries to nurture institutions which are specific to their transformation path. If this is true, this goes some of the way towards weakening the argument that T.V.Es contain no lessons because there are structural differences between China and other socialist and post-socialist economies. This line of argument in itself, is not totally successful in dealing with big bang reasoning. The reason is that the advocates of big bang argue that the lessons are not relevant because there are *structural similarities* in Eastern Europe, which differ from China. However, at a few different levels, there are some objections to this argument.

A first possible objection is less tangible. More moderate economists have pointed out that there are signs in Sachs & Woo (1994) that the authors argue from pre-existing convictions that market regulation must be superior. Most prominent economists and the main aid and lending institutions were vocal advocates of rapid transition in Eastern Europe. It follows that their reputation rests on the correctness of these strategies. Nolan (1995 p.263) goes as far as to suggest: "it is not too fanciful to talk of an intellectual 'compradore' mentality in Russia ... with those who followed the path of 'free market reform' able to expect visiting fellowships in western institutions and other rewards as part of an

implicit contract for their help in legitimising the correct line". The thinly veiled suggestion, in this passage, of an academic conspiracy might be going too far, but it does highlight the obvious incentive which big bang advocates have to limit the potential relevance of policies which appear to contradict the "correct line".

A second more fundamental objection is that Sachs & Woo (1994) base their argument on a normal path of development. This suggests China's growth rate is higher because its reforms were easier due to structural advantages and because it was coming off a lower base. According to Sachs & Woo (1994 p.43): "China's reform problem is the classic development problem of moving surplus agricultural labour into industry and services, while Eastern Europe and Russia's reform problem is the more difficult and conflictive adjustment problem of inducing labour to move from non-competitive industries". This, in itself, might be a fair depiction of the processes involved in China vis-a-vis Eastern Europe, although which was easier is not clear cut. A point that a number of writers have made is that while surplus agricultural labour proved to be a plus *ex post*, it wasn't considered an advantage at the start of the reforms (see eg Singh 1993, Nolan 1995 and Chang & Nolan 1996). Singh (1993) makes the following point:

"It is often argued that it is easier to carry out market reforms in agriculture than to reform the industrial economy. This, however, fails to take into account the differences in the nature of the markets for agricultural and industrial products. As is well known, left to themselves the former are highly volatile. ... This consideration should in principle make complete marketisation of the agrarian economy a more difficult undertaking than that of the industrial economy" (Singh 1993 p.13).

Chang & Nolan (1996 p.22) reinforce this view through stressing the fact that the capital needs for expanding agriculture can be particularly large in a densely populated country like China. These authors (at p.22) also refer to research

TABLE 8.2
GROWTH RATES AND THE PROPORTION OF LABOUR IN AGRICULTURE AND INDUSTRY
IN CHINA AND RUSSIA, COMPARED TO THE NON-COMMUNIST COUNTRIES

<u>COUNTRY</u> or <u>COUNTRY</u>	<u>LABOUR FORCE IN EACH SECTOR (%)</u>			
	<u>AGRICULTURE</u>		<u>INDUSTRY</u>	
<u>GROUPING</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
CHINA	74	72	14	15
INDIA	70	64	13	16
RUSSIA	16	14	44	42
L.I.Es	73	69	13	15
M.I.Es	38	31	27	27
H.I.Es	7	5	35	31
H.P.A.Es	31	25	28	28
	<u>AVERAGE ANNUAL GROWTH RATE G.D.P (%)</u>			
	<u>1980-1990</u>		<u>1990-1994</u>	
CHINA	10.2		12.9	
INDIA	5.8		3.8	
RUSSIA	1.9		-10.6	
L.I.Es	2.9		1.4	
M.I.Es	2.2		0.2	
H.I.Es	3.2		1.7	
H.P.A.Es	6.2		6.9	

NOTES:

LIEs = lower income economies (excluding China and India)

MIEs = middle income economies

HIEs = high income economies

H.P.A.Es = high performing Asian Economies which were the subject of World Bank (1993)- ie Japan, Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia and Thailand.

SOURCE: World Bank (1996)

which people like Little (1979) have carried out which suggests that the economic success of the "four tigers" (Hong Kong, Singapore, South Korea and Taiwan) was due to the fact that each had a small farm sector at the start of their phase of accelerated growth. When we take account of arguments like these, the empirical dilemma for Sachs & Woo's line of reasoning is that China has not just outperformed Eastern European countries, but has (i) performed much better than all developing countries, which were coming off similar bases with similar structural advantages in terms of large agricultural sectors and (ii) has performed better than the high performing Asian economies - the "four tigers" and the "new industrial countries" (Indonesia, Malaysia and Thailand). Table 8.2 contains some statistics on this point. China's growth rate is well in excess of the average for the middle income and high income countries (where the proportion of labour in agriculture is low) and the average for the low income countries (where the proportion of labour in agriculture is much higher).

More than this, the issue of whether there even is a "normal path of development" is controversial. The issues, here, are manifest in the debate over *The East Asian Miracle* (World Bank 1993).³ The World Bank, in *The East Asian Miracle*, put forward a similar argument to Sachs & Woo (1994) in relation to the "four tigers", the "new industrial countries" and Japan. The challenge, for the World Bank, in that report, was to explain the success of these high performing economies in terms of its "market friendly approach". To do this, *The East Asian Miracle* explains economic development in terms of a "neoclassical transformation". The report, commenting on industrial policies, states: "the manufacturing sector[s] ... evolved roughly in accord with neoclassical expectations. .. It is possible that the government[s] undertook measures such as the provision of social overhead capital, [but this just] facilitated the 'neoclassical' transformation" (World Bank 1993 pp.333-334). However, this seems to suggest that irrespective of how much government intervention (or

promotion) there is, as long as the economy, or a sector of it, is successful, its success must have conformed to neoclassical prescriptions (Kwon 1994 p.641) - ie. a normal path of development. However, this leaves unresolved the issue of what would have happened in the absence of non-market regulation - would there actually have been a normal path of development *or* underdevelopment?

A third objection is that advocates of big bang such as Sachs & Woo (1994) highlight the differences in initial conditions between China and Eastern Europe, but tend to discount the fact that, in spite of structural similarities, there are a range of transitions - social economic and political - occurring in different countries *in Eastern Europe*. While writers advocating big bang often recognise that these different transitions are taking place, the big bang approach does not incorporate them into its general model. Instead economic, political and social differences across countries are treated as aberrations on the model's assumptions which will be ironed out over time with further market liberalisation. Stark (1992 p.18) sums up the implications and limitations of this approach:

"The [advocates of big bang] approach the problem of *the transition* exclusively through the lens of their general models. Through such a gaze, differences among the countries in the region are merely differences in degree (the timing and rapidity of collapse, the strength of elite commitment to reform, the speed of introducing new policies and the like). ... Contrary to such views we should regard East Central Europe as undergoing *a plurality of transitions* in a dual sense: across the region we are seeing a multiplicity of distinctive strategies; [while] within given countries, we find not one transition, but many occurring in different domains - political, economic and social" (emphasis mine).

The fourth objection is that, although the potential of some of the normative lessons can be debated on structural grounds (such as, for example, whether progress is possible without privatisation) most of the underpinning features of T.V.Es' reform such as the role of path dependence and the existence of diverse organisational forms are inherent in the transformation process itself. These sort of broader factors relate to process and are of general relevance irrespective of structural differences. The main point, in this regard, is that the fundamental issues that T.V.Es raise for the theoretical framework, in particular in terms of ownership, cannot easily be dismissed on the grounds of structural differences. The success T.V.Es have had show that it is possible to cultivate institutions which are specific (eg. the T.V.E-T.V.G relationship). If T.V.Es suggest a general lesson, it seems to be that distinctive strategies might be needed to get the best out of various specific factors that exist in different socialist and post-socialist economies. The rest of this section will explore some of the implications for the theoretical framework that follow from the suggested lessons in more detail.

(i) The Implications of *Lesson one* - Path Dependence is Important

(a) The transition path differs *between* countries and *within* countries.

The theoretical framework stressing the role of path dependent factors in T.V.Es' success does not shed light on the similarities or differences in the transition paths in other countries. Therefore, in order to make some comments about the heterogeneous nature of transition we need to move outside the framework. The experience of different countries can be illustrated with a couple of (broad-brushed) examples. The experience of Eastern European countries in terms of enterprise restructuring and privatisation has been diverse. First, some countries (eg Hungary and Poland) seemed more market oriented to begin with than others. Second, as central controls were lifted the Czech Republic, Slovakia and, to a lesser extent, Hungary experienced a wave of break-ups and spin-offs

of large S.O.Es. This did not happen in other countries to the same extent. Third the Czech Republic and the former G.D.R have undertaken privatisation at a much faster rate than other countries (Svejner 1996 p.123). The political transitions have also varied between countries. (eg. reunification between East and West Germany, compromise between the communists and trade union movement in Poland and electoral competition in Hungary - Stark 1992, Welsh 1994). At best these examples give a superficial picture of the complex nature of the different transitions, but still suggest that there might be "diverse paths of extrication from socialism" (Stark 1992 p.48) across countries. The theoretical framework stressing the importance of path dependence in T.V.Es' success does not shed light on whether these different transitions actually exist. However, it does suggest that if it is accepted that these differences do exist, there is potential in exploring the manner in which path the dependencies interact.

(b) There is a potential role for *pre-existing* socialist institutions

The model in chapter five stressed the role of pre-existing socialist institutions - in particular the importance of socialist political heritage. The model suggested that the cadre-entrepreneur is a vehicle to solve collective action problems that build up around informal institutions. The implication for other socialist and post-socialist countries is that there might be a role for pre-existing socialist institutions in their respective transformations. This does not mean that pre-existing socialist institutions will *a priori* assume a pro-active role as the cadre-entrepreneur seems to. However, the big bang approach, in Eastern Europe, sometimes appears to be based on the premise that individual economies are "starting from scratch" (Stark 1992 p.20). But the collapse of Soviet type economies in Eastern Europe did not leave an institutional void. Thus the implication is that variations in the institutional legacies of socialism in different countries might have an effect on how economic and political institutions are shaped in the transformation period (see Skocpol 1979, Bruszt & Stark 1992).

While it is not hard to imagine circumstances where pre-existing socialist institutions can preclude some directions, T.V.Es show that pre-existing socialist institutions can also open up opportunities for different transformation paths.

(c) The theoretical basis of the big bang approach is undermined

If the transformation process is path dependent and, as such, rooted in the conventional behaviour of economic agents, the theoretical basis of the big bang approach is brought into issue. The lines of argument, here, echo gradualist objections to the big bang approach (see eg Murrell 1991b, Nove 1992, Van Ees & Garretson 1994, Horne 1995). First, if path dependence is relevant in the transformation period, economic behaviour will, at least to some extent, still be based on pre-existing socialist constraints. If this is the case an immediate shift to "the market" might be counter-productive because economic agents might have good reason to doubt whether the imposed institutions are credible and/or reliable (Van Ees & Garretson 1994 p.9). Second, the big bang approach treats post-socialist transformation as an exercise in comparative statics. The focus is on comparing static efficiency in two equilibrium states - ie. central planning and markets. The transition from the former to the latter is depicted as a "seamless web" (Lipton & Sachs 1990 p.99). The problem with this is that if post-socialist transformation is path dependent, the process cannot be reduced to general equilibrium theorising. This carries implications for whether it is desirable or even possible to transfer the institutions of western economies to Eastern Europe. The main point is spelt out in Van Ees & Garretson (1994 pp.9-10):

"If path dependency is no longer just another equilibrium outcome ... historically determined institutions and conventions in western type economies are no longer necessarily a blue-print for Eastern Europe. This implies that our set of institutions cannot simply be transferred to Eastern European countries. In case institutions and/or conventions ... are interdependent, agents in Eastern Europe may wish to follow a

different adjustment strategy that is not automatically compatible with 'western' institutions or conventions. From the point of view of transformation this means that the transition in Eastern Europe towards a market economy cannot merely be a copy of the development of market economies in western countries. ... Similarly, if path dependency is understood as being interwoven with the individual decision making process there is no longer any reason to assume that the ability of agents to transform existing institutions or conventions is the same across Eastern and Central Europe. As Weitzman [1993], for instance, observes there might be sound cultural or historical reasons why this ability could differ between say Russian and individual Czech agents".

(ii) The Implications of Lesson two - Different Organisational Forms

There might be alternatives to the Anglo-Saxon model of capitalism in other socialist and post-socialist economies. The existence of different organisational forms in T.V.Es does not, in itself, mean that diverse organisational forms will be preferable in other transforming countries. However, it does suggest that there might be advantages in shifting the focus from transition (which emphasises destination) to transformation (which emphasises actual processes). At one level this would provide opportunities to explore the merits of, and the potential for, diverse organisational forms such as "networks", "alliances" and "inter-firm agreements". There is some work on different governance structures in Eastern Europe (eg Carroll *et al* 1988 Szelenyi 1989, Stark 1989), but in relative terms it has not been influential. At a different level it opens up possibilities to explore the merits of different models of capitalism or even market socialism. The choice, and merits, of different forms of capitalism - for example the "Anglo-Saxon model", the "Japanese model" and the "German model" - has received little attention in reform programs (Nolan 1993a chap. 6, Chang 1995, Horne 1995). The model, in chapter six, suggests that T.V.Es are similar to the J-

mode. The fact that T.V.Es have evolved to resemble the J-mode suggests that a different strand of capitalism (whether it is the "Japanese model", the "German model" or some variation involving something new) might also be preferable to the "Anglo-Saxon model" in other socialist and post-socialist economies.

(iii) The Implications of *Lesson three - Ex post* Coherence of Reforms

The success of T.V.Es show that there are alternatives to implementing new institutions through conscious design. In fact, there may be advantages in taking an ad hoc approach. "[The leadership] refrained from making quick judgements and suppressing 'illegal practices'; instead they let time be the judge. This tolerance of heterodoxy fostered innovation in institution building. ... [T.V.Es'] success demonstrates the effectiveness of providing time for learning and adaptation, rather than importing foreign systems overnight" (Chen 1993 p.139). Of course there are also costs in adopting an ad hoc approach. The lack of a clear blueprint for reform is a significant shortcoming. However, at the same time, the relative merits of conscious institutional design are also debatable. If it is accepted that no single approach to reform is perfect then the orthodox approach needs to be subjected to the same treatment as the alternatives - both its benefits and costs have to be weighed up, rather than treating it as an ideal against which all other approaches are assessed. In this respect the advocates of big bang point to the perceived longer-term benefits of an *ex ante* coherent reform package, but whether the (potential) longer-term benefits will outweigh the more immediate socio-economic costs is not clear.

To this point the evidence from big bang economies suggests that the imposition of new institutions, inherent in conscious design, has had a destructive effect on fledgling organisational forms, at least in the shorter term. The critics of big bang argue that this reflects the fact that it is not possible to remake property relations according to design (see Murrell 1992c, Stark 1992). While, on

available evidence, this overstates the case against big bang, what is more defensible is that T.V.Es seem to have *ex post* developed an advanced capitalist form - the J-mode - at a lower cost, measured in terms of output, than conscious reform strategies in Eastern Europe. Thus, inspite of the fact that experimentation lacks a clear blueprint at the outset, this suggests that ad hoc reform might present a more gentle alternative to conscious institutional design. Even if this is going too far on the limited time frame so far, it seems reasonable to conclude that the empirical support for conscious design is, at this stage, uncertain and T.V.Es show that experimentation can be a feasible alternative.

(iv) The Implications of Lesson four - Progress Without Privatisation

The possible implications of this suggested lesson are controversial on a couple of different fronts. As stressed throughout this chapter, it is uncertain whether T.V.Es will continue to perform well with "ambiguous" institutional arrangements. Second, the advocates of big bang point to the higher percentage of S.O.Es in Eastern Europe and argue that there was little choice but to privatise most of them. Sachs (1995 pp.457) states "The critical differences in economic structure revolve around the level of economic development. Eastern Europe and the former Soviet Union were much more *industrialised* and *urbanised* at the start of their reforms than the East Asian transition economies at the start of their reforms or than Japan in the immediate post-war period" (emphasis in original). But, whether this paints an accurate picture is debatable. In terms of the proportion of the labour force in agriculture it is true that the U.S.S.R was more industrialised than China at the start of the reforms (see table 8.2), but if we look at a breakdown of G.D.P, the structural differences are not as clear cut.

TABLE 8.3
STRUCTURE OF G.D.P IN PRE-REFORM CHINA AND THE U.S.S.R, COMPARED TO THE
NON-COMMUNIST COUNTRIES

(figures are for 1980, expressed as percentages)

SECTOR	U.S.S.R.	CHINA	LIEs	MIEs	IMEs
AGRICULTURE	16	31	45	15	4
INDUSTRY	62	47	17	40	37
SERVICES	22	22	38	25	62

NOTES:

LIEs = lower income economies (excluding China and India)

MIEs = middle income economies

IMEs = industrial market economies

SOURCE:

Nolan (1995) Table 5.2

Table 8.3 presents some statistics on this point which are taken from Nolan (1995 p.124). The statistics are for 1980 which is representative of the pre-reform period in both countries. These show that a large share of G.D.P in the U.S.S.R, was produced in the industrial sector (62%). However, Nolan (1995 p.124) points out "China was also 'overindustrialised' in the sense that the industrial sector reportedly produced a very much larger share of output than might be expected for a country at its level of income". The figures bear this out. The industrial share of G.D.P, in both China (47%) and the U.S.S.R (62%), was much larger than the average for the lower income countries (17%), and even outstripped the average for the industrial market economies (37%). The conclusions Nolan (1995) reaches contrast with Sachs (1995). Nolan (1995 p.124) writes: "If one accepts that there were serious inefficiencies in Chinese industry, just as there were in Soviet industry, then it may be argued that China's 'over-industrialisation' was an even greater burden [in] China than it was [in] the Soviet Union. ... [T]he 'over-industrialisation' was in a vastly poorer country, with a much lower income level from which to generate resources for growth".

If this is the case, it is difficult to dismiss the suggestion that progress is possible without privatisation on structural grounds. If the 'over-industrialisation' burden

was similar in both countries, the fact that T.V.Es provided a vehicle to drive growth rates while reforms were made to S.O.Es, must be of relevance to Eastern Europe. However, even accepting the big bang perspective, if we put privatisation to one side, T.V.Es seem to demonstrate that rapid economic improvements can occur through creating an environment where new industries and new institutions can emerge. This is a wider point than whether or not to privatise. Thus, even if we accept the basic premise of the big bang argument that, given its structural characteristics, mass privatisation was the best option in Eastern Europe, the success of T.V.Es suggests that it might not be optimal for Eastern Europe to place too much emphasis on privatisation *per se* as a panacea to revitalise its industries (Johnson 1994 p.72). The important issue, which is separate from the ownership structure, relates to whether the reform program creates an environment for new industries and institutions to emerge. As a starting point this requires further discussion about how to design and implement long-term industrial strategies, but the problem is that this issue has been marginalised in the debate on Eastern Europe (see Chang 1995 pp.386-387).

8.4 TOWARDS AN ALTERNATIVE PERSPECTIVE ON POST-SOCIALIST TRANSFORMATION

The problem with most of the transition literature is that in attempting to explain firm-level performance, it focuses on the market rather than the firm. As a result it ignores the potential contribution of organisational and technological innovation, including the role of collective learning in generating innovation. Hence, if the theorising about T.V.Es in this thesis is to provide the basis of an alternative view of post-socialist transformation, the cooperative culture theme needs to be viewed in more general terms. A point made in earlier chapters is that influential papers such as Weitzman & Xu (1994) make no attempt at all to challenge the post-socialist transition approach in Eastern Europe. Weitzman & Xu (1994) argue that T.V.E success is due to co-operative culture at the societal

level. Pei (1996), however, presents an alternative view to Weitzman & Xu (1994). He argues (at p.44) that "the success of T.V.Es is mainly due to the specific [cooperative] elements of a village or rural community, and not to general cultural elements". An advantage which Pei's argument has is that it focuses attention on the "group" (ie. corporate group, village-township etc) as the basis for co-operative action. This line of reasoning opens up possibilities for generalising the lessons from T.V.Es to Eastern Europe because, when the focus is on the potential for cooperation in a group, the co-operative culture theme ceases to be an Asia-Europe issue. The potential for group co-operation, instead, becomes analytically traceable. This was the basis of the argument, in chapter five, that T.V.Es are a subset of a broader literature on regionalism.

If there are lessons in the T.V.E experience for Eastern Europe, the J-mode also needs to be seen as part of a broader cooperative culture theme which has a more general application. The relationship between the different strands of co-operative culture and their inter-relationship with the market-hierarchies rationale, was explored in chapter three. The point made in that chapter is that when the J-mode is seen as part of a broader collective learning culture T.V.Es begin to reflect Best's (1990) "new competition", encompassing elements of the J-mode, flexible specialisation and the techno-economic paradigm. While there is some contrary evidence, a wealth of studies exist which suggest that J-mode institutions have wider application. For example, Adler (1993), Helper (1991), Kenney & Florida (1993) and Morris & Imie (1992) document the success of J-mode transplants in a number of industries (eg automobiles, consumer electronics and steel) in the United States and Western Europe.⁴ In addition, Ouchi (1981) found J-mode features in the best managed American firms and Kochan *et al* (1986) describe the increasing adoption of J-mode features such as flexible team work and worker participation programmes in *non*-union firms in the United States. There is also extensive research on profit sharing and cooperative work organisation in the U.S which draws on the J-mode suggesting that differences between the A-mode and J-mode are matters of degree (see

Bonin & Putterman 1986, Bradley & Gelb 1983). Chapter six built on these ideas to explore different organisational forms in terms of the division of labour.

The literature on new regionalism provides a possible avenue for generalising the collective culture theme as an alternative perspective on post-socialist transformation given that in China regional development provided the basis for nurturing new and diverse institutional forms. The collective learning theme is not just about small firms. Analytically it is indifferent to firm size with some cases involving mostly small firms - for example industrial districts - and others not - for example the J-mode. Nevertheless an important aspect of the new regionalist approach entails considering possibilities for promoting small and medium enterprise development alongside large-scale S.O.Es and in some cases former S.O.Es. This was the approach which was adopted in China. In Eastern Europe and the former Soviet Union "U-form" hierarchical planning coupled with the military industrial complex discouraged the growth of small-scale industries. Although some declared themselves to be federations (such as Czechoslovakia and the Soviet Union) and/or established a number of 'autonomous republics' (the Soviet Union) the economies were centrally planned from their capitals. The responsibilities of regions were mainly limited to issues relating to culture, language and schooling, while those of lower administrative units such as counties and districts were mostly insignificant (Balaz 1995 p.353).

In contrast to China, in the Soviet model of socialism in Eastern Europe one or two industries dominated entire local economies. "The industrial economy that was created produced distinct regional formations of enterprise regulation. Vertically integrated large enterprises dominated many regional economies and created local 'cathedrals in the desert' characterised by high levels of local autarky" (Smith 1995 p.763). For example in the former G.D.R in the late 1980s in one-third of 189 districts the leading local industry accounted for 40-60% of total employment (Grabher 1994 p.180). Apart from utilising the local labour force, individual plants generally had no economic relations with the region in

which they were located. As a result the notion of the region as a socio-spatial network had no economic meaning. However, since the collapse of central planning, regional governments have been strengthened and local authorities with the support of central governments have attempted to shift the focus to regional based development in quite a number of East European countries.⁵

Foreign donors are also attempting to foster the growth of small enterprises in Eastern Europe and the former Soviet Union. For example in September 1996, the World Bank's IFC created a \$US40 million small enterprise fund to support small and medium enterprises in sixteen countries including transition economies such as Azerbaijan, Kazakhstan, Slovakia and Uzbekistan.⁶ The European Bank for Reconstruction and Development (EBRD) is another foreign lender which pins great hopes on the contribution of small and medium enterprises to economic reconstruction and income generation in Eastern Europe (EBRD 1992). The EBRD (1992) argues that a possible avenue forward is to promote regional development paths through technoparks and small firm incubators. The main idea behind this approach is to provide clusters of start-up firms with space (site, building and workshop) and producer services (for example advice on finance management and marketing). A number of institutions have been identified in Eastern Europe that might be able to facilitate regional development policies of this sort such as HESPA in Russia, REGRO CSFR and NADSME in the Czech and Slovak Republics and SEEC in Estonia.⁷

European Union aid programmes such as PHARE⁸ and agencies such as the EBRD and World Bank have been looking for "models" which can assist them in deciding how this process can be supported from outside with financial and technical assistance. However, potentially one of the problems with most existing projects of this sort is that small-scale industries are promoted at the expense of larger firms. In all of the major capitalist economies large firms are important in a range of industries. Hence, it is at least arguable that there should continue to be a role for large firms in Eastern Europe as part of a pattern

of institutionalised diversification,⁹ but a major aim of the World Bank and the EBRD is to promote small-scale industries as a method of industrial restructuring. For example, in 1992, an EBRD report recommended that its main objective should be to promote conversion "from monopolistic, large scale, rigid structures to competitive, smaller scale, flexible structures" EBRD (1992 p.9). More recently, the president of the World Bank, James Wolfensohn, expressed a similar view. He is reported as stating that one of the Bank's main objectives is "to help Russia restructure its natural monopolies".¹⁰ The Chinese experience with developing T.V.Es in a regional framework suggests that there is a different and arguably better approach than down-sizing. In China small-scale flexible industries were promoted in conjunction with multi-plant regional based S.O.Es rather than as an alternative. The result is that both have benefited from the existence of diverse ownership forms through providing an outlet for each others products, the provision of inputs and the exchange of technical staff.¹¹

Most of this thesis has focused on T.V.E regionalism, but there is historical precedent which suggests that regionalism provides a more general avenue for economic development. Sabel (1989 p.17), writing about Europe, points out: "Until at least the mid-nineteenth century, the region was a natural unit of economic activity and analysis. ... [The] regions were both flexible and specialised. ... Even the strongest firms in these systems of flexible specialisation depended on extensive co-operation with their competitors either directly through complex, rapidly changing subcontracting relations or indirectly through joint participation in the institutions regulating the municipal; economy." The potential relevance of regional based economies was overlooked for a significant period. However, the concept of regional based economies has re-emerged as a dissident perspective on advanced capitalist economies in recent times - in particular since Piore & Sabel (1984). The flexible specialisation literature provides an alternative perspective for dissenting economists disenchanted with the perceived failure of mass production. The renewed prominence of flexible specialisation has also been reinforced with the re-

emergence of a number of successful regional based economies in the 1970s and 1980s in diverse industrialised market economies in Europe, Japan and the United States as well as a range of developing countries in Asia and Africa.¹²

There have been several criticisms made of flexible specialisation. The main criticisms focus on its empirical validity, its heuristic application and the capacity of its central conclusions to be converted into policy. A common criticism is that industrial districts - in particular in the Third Italy - have not performed as well in the 1990s as in the 1970s and 1980s.¹³ For example Cooke & Morgan (1994) refer to Emilia Romagna as a growth region under duress and Bianchi (1994) suggests that it is time to sound the first note of a "Requiem for the Third Italy". Nevertheless, there is evidence to suggest that the perceived decline of industrial districts in recent times has tended to be overstated by the critics of flexible specialisation. Franchi (1994) considers the performance of industrial districts in Emilia Romagna over the period 1983-1994. She concludes that some industrial districts are in crisis, but most are not. Franchi's (1994) findings are supported by other studies of the Third Italy - for example Harrison (1994) and Camagni & Rabellotti (1993) who focus on the Italian footwear districts.

A more serious objection is flexible specialisation is often used as a pseudonym for post-Fordism. To overcome this, there is a good argument that "'flexibility' itself needs to be unbundled into a range of separate components - not least ... in terms of the increasing sophistication, scope and flexibility and heterogeneity of flexible specialisation itself as a concept" (Fine 1995 p.109). This relates to the criticism, discussed at length in chapter three, that there is a tendency in the flexible specialisation literature to draw a dichotomy between Fordist and post-Fordist production where none need exist. If the concept of 'flexibility' is unbundled "it is not necessarily the case that the separate components will always shift in the same direction, towards or away from new forms of production. Indeed it is apparent that flexibility in one component of an economic system may require rigidity in another component" (Fine 1995 p.109).

However, in spite of the fact that flexible specialisation has some theoretical shortcomings and at an empirical level the verdict on industrial districts remains open, new regionalism suggests a clear analytical approach. The emergence of new successful forms of production in some regions, but not others, suggests something fundamental about the relationship between localisation, regional differences and specificities which provides the foundations for some general lessons that are helpful for approaching reform, irrespective of where one stands on the debate over the theoretical underpinnings of flexible specialisation. The specific imagery associated with pure regional models - like the Third Italy - or the J-mode might not be appropriate given the fragile nature of the industrial economies in Eastern Europe, but a range of studies in different sectoral, regional and national contexts reveal that inter-firm cooperation can take a diversity of forms (see eg Bureau of Industry Economics 1994). And there is growing recognition that the dynamic forces in contemporary capitalist development are both localised and territorially specific, not just amongst regionalists, but also amongst economists and management strategists (see eg Dosi *et al* 1990, Porter 1990, Amendola *et al* 1992, Krugman 1992, 1995).

The new regionalism literature is useful because it places models of industrial organisation in the context of trajectories (see Humphrey & Schmitz 1996). The notion that different organisations reflect growth trajectories is consistent with most of the points made in the last section - in particular that distinctive strategies might be needed to get the best out of various specific factors that exist in different (post) socialist economies. There are parallels between the prescription, in the flexible specialisation literature, for developing poorer regions *within* capitalist economies and the idea that transforming economies should be left to develop their own institutions. Sabel (1989 pp.40-41) states: "In the heyday of mass production poorer regions were conceived as blank spaces on the national map of industry, to be filled in by the same development strategy. ... [But this view has given way to] a single view of the region as an economic

entity full of under - or unused resources that range from traditional artisanal skills to petty commerce. *Prosperity depends, according to the new doctrines of endogenous growth, on developing these resources rather than importing the equipment and skills of a mass production economy from the rich exterior*" (emphasis mine).

There are strong similarities between mass production, in the debate on late industrialisation, and big bang in the post-socialist transformation debate. The focus of both tends to be on a general model with general application which fails to recognise the embeddedness of regional economies. Notions that in Eastern Europe there can be a smooth transition from planning to the market fails to recognise the existence of different regional patterns. The regional approach shifts the emphasis from a general model to the specific circumstances that exist in individual economies and focuses on how to make the most of their potential. This approach is reflected in the so-called urban literature which crosses the social sciences, but has strong roots in economic geography. It focuses on the political and social organisation for change, in capitalist economies, in the main at a local urban level (eg Agnew 1987, Cox & Mair 1987, Gottdiener 1987, Savitch 1988). This approach presumes multiple avenues for development, dependent upon contingent conditions within local contexts. Thus variations in strategies for development are explained in terms of a wide range of factors relating to the character of production and the role of socio-economic, political, financial and legal institutions - both formal and informal. The different avenues for development are "the synergistic results of context" (Ettlinger 1994 p.146).

The concept of "the region" is developed in this thesis, in terms of a group (eg. village-township or corporate grouping) based on a high degree of trust. If these ideas are to be generalised as an alternative perspective on post-socialist transformation, an immediate issue is what perspectives are applicable outside of the group or where a group does not exist? This is particularly relevant given the point made above that the effects of "U-form" planning means that a lot of Eastern European industries are still centralised with vertical information flows

which is potentially problematic for regional policies. A major criticism of the flexible specialisation is that it is confined to specific industries and regions which share certain characteristics. This is an issue with which the flexible specialisation literature is battling to come to grips. As Storper (1995 p.194) puts it in the context of the literature on Western European regionalism: "There are deep historical roots to the Italian and German examples. ... [Thus] the critics asked how it could be expected that in other regions similar forms of industrial skill and co-ordination could be built *de novo*. This [is] a valid doubt about the collaboration-competition thesis: if it [is] a particularity of the conventions of certain regions, what about other regions with more orthodox (that is Anglo-American) competitive norms?" This raises basic concerns about the extent to which flexible specialisation claims to be an absolutist paradigm.

Piore & Sabel (1984) generalise the case for regionalism, in this manner, in attempting to set up flexible specialisation as a complete post-Fordist alternative. These authors speak of two "industrial divides". The first industrial divide was the rise of mass production following the industrial revolution. The second industrial divide is the replacement of mass production with flexible specialisation. A superficial interpretation is that generalisations of flexible specialisation of this sort do no more than point to geographical differences and emphasise that regions should be allowed to develop at their own rate. A more critical interpretation is that their argument denies the relevance of markets and hierarchies. If the latter reading is correct this reflects a confusion in the new regionalism literature about (i) whether flexible specialisation is a general paradigm and (ii) if so what scope remains for the market-hierarchies' rationales.

The confusion in the new regionalism literature is dissipated when flexible specialisation is placed in the context of the broader collective learning

literature. The literature comparing the A-mode with the J-mode, in particular, is important in this regard. An attempt was made in chapter three to reconcile the market-hierarchies and collective learning paradigms through placing them in the context of the division of labour. The social division of labour can support the existence of networks conducive to collective learning. The detailed division of labour can support the market-hierarchies rationale. Piore & Sabel (1984) overstate the case for flexible specialisation. Consistent with the late industrialisation literature, depending on the circumstances, informal arrangements might be preferable to both markets and hierarchies in terms of promoting productive efficiency. This does not rest on denial of either markets or hierarchies as purposeful institutional alternatives. The models in chapters five and six suggest that it is possible for the collective learning and market-hierarchies' paradigms to co-exist in transforming economies as complements, and it is possible to combine different features of markets and hierarchies to create new distinctive organisational forms. The implication is that no single paradigm provides a universal explanation for organisational structure in post-socialist transformation. Hence post-socialist transformation is consistent with diverse organisational forms - markets, hierarchies and collective learning.

If it is recognised that collective learning and market-hierarchies can co-exist as valid institutional complements, the basis exists for theorising about the performance of different enterprises in the process of transformation. The basic argument is that sometimes, and in some circumstances, there might be advantages in rigidities inherent in markets and/or hierarchies and at different times, and in different circumstances, there might be advantages in flexibilities inherent in less formal institutions. A possible rationale for this lies in the form of market demand. If market demand is stable, rigid institutional forms will perform better, but if market demand is volatile, flexible institutional forms will be more successful. It assumes that certain exogenous or endogenous market conditions give rise to uncertainties - for example shifts in market conditions or movements along technological trajectories. These uncertainties are met by deepening the

division of labour, in one case to minimise exposure to risks of overcapacity, in another to maximise the benefits of specialisation and minimise the danger of technological lock-in. This provides a possible *ex post* explanation for enterprise performance, but it is not clear to what extent a market demand rationale can support strategies for development at a micro level. To put it in different terms, market demand is *ex ante* a parameter for the firm which is predetermined at a macro level through a range of broader economic and political considerations.

An alternative rationale which complements, or at least is consistent with, the market demand rationale focuses on the degree of trust in the trading relation. This rationale, which was considered in chapter five, suggests that if trust in the trading relation is high, flexible institutions will be preferred because of the potential for value creation over and above value allocation in markets and/or hierarchies. If trust in the trading relation is low, the parties will sacrifice flexibility for more rigid forms of deterministic exchange and division of labour. These rationales are both prominent in the collective learning literature, but there is an important difference between the two. The difference is that, in the latter, the degree of soft trading is endogenous to the firm - ie. the degree of soft trading is a choice variable for the firm which is dependent on perceived risk of default - where, as pointed out above, market demand is exogenous to the firm.

However, irrespective of the rationale, (ie. whether it is *ex ante* a function of trust in the trading relation or *ex post* dependent on market demand) the choice of flexible or rigid institutional form will be a function of time and space. The choices are variable *between* countries and *within* countries and at different points in time, perhaps even different stages in the transformation process. This suggests that if we look at different socialist and post-socialist countries, the mix between flexible and rigid institutional responses will differ, but the potential

exists for a diverse range of organisational forms both at a given point in time and over time. The scope for flexible institutional forms is not fixed in advance, but is dependent on the extent to which firms, and governments, are willing to experiment with new and different governance structures. The main point is that there are advantages and disadvantages in *both* flexible and rigid institutions which might depend on factors such as the degree of trust in the trading relation (ie. the risk of default) and/or the pattern of growth (ie. whether market demand is stable or volatile). In a broad sense the new regionalism suggests that policies should be designed which recognise that these advantages and disadvantages exist and nurture the institutional choices made at a micro level. This requires close attention to the role played by institutional forces which are largely specific to countries, regions or sectors such as the legal system, social norms and practices governing business practices and prevailing notions of what constitutes ethical behaviour in business relations (Arrighetti *et al* 1997 p.173).

It is arguable that a shortcoming with this approach is the absence of a clear blueprint with well-defined policies. In this respect there are similarities between this approach and more mainstream gradualist perspectives. The failure to come up with a well-defined blueprint is not trivial. Van Ees & Garretsen (1994) suggest that the main reason big bang was implemented in Eastern Europe was political - ie. it provided governments with a set of well spelt-out policies in advance. However, the fact is that policies designed to create regional economies have had limited success. There are some notable exceptions. Two examples are the Centro Informazione Tessile Emilia Romagna (CITER) in Modena and the Danish network programme.¹⁴ However, most industrial districts in capitalist economies were not intentional creations, but organisational initiatives at the micro level. This reflects the fact that, first and foremost, regionalism involves a bottom-up approach to development. Thus "according to the theory of flexible production, it is exclusively the firms that are able to

manage regional development (industries 'produce' regions); in the logic of this argument there is little room for political influence" (Sternberg 1996 p.528).

This is not to suggest that, at one level, policies do not exist which could make the preconditions more favourable. The establishment of specific preconditions tend to be seen in terms of either fostering communication among economic actors or formulating capacities for collective action. In this sense, in contrast to mainstream gradualism, new regionalism does not leave the evolution of new organisational forms solely to the market, but makes a conscious effort to foster their evolution in territorially specific spaces, especially in terms of national systems of innovation (see eg Freeman 1988). Along these lines Lorenz (1992) suggests that a policy maker could act as Popkin's (1988) political entrepreneur:

"[The] policy maker as political entrepreneur would persuade producers, with the use of selective incentives, that they would benefit from independently providing tangible collective goods such as apprenticeship training or collaborative research and development. ... Persuading producers actively to participate in the effort would be key. Active participation, if successful, would increase the amount of communication among producers and would contribute to creating the trust among them that is the prerequisite for sharing technical information." (at pp.202-203).

Storper (1995) highlights the importance of capacities for collective action:

"[The regional framework] calls for policies to produce public goods where markets are likely to fail or to be slower than desired, but allows that they may be *specific* to technological-economic spaces; it is the developmental properties of these spaces (evolution through learning, spillovers and complementarities) that ultimately *generalise* their benefits, and make it possible for such general effects to widen over time, in an open-ended fashion. Such specific public goods include such traditional objects of

policy as labour skills and training, technologies and industry - or region specific - assistance to firms, but the most important of public goods ... [is] the conventions which make possible certain *capacities for collective action* and co-ordination ... " (at p.212 emphasis in the original).

The concept of capacities for collective action is illustrated by the Danish network programme which operated from 1988 to 1993 with a view to fostering Danish small and medium enterprises. The central figure was a "network broker" who identified opportunities, brought participants together and assisted in implementing new ideas and projects.¹⁵ In the Third Italy there are a lot of examples of policies that are designed to promote public goods. One example is CITER operating in knitwear in Modena which was set up with public funds in 1980, but now it is financed by member companies. It collects and distributes information on market prices, fashion trends and technological developments to local firms. A second is Centro Servizi in Pisa which services the footwear and leather industries through providing a data bank on clients, markets and other information relevant to the sector. Others are TECNOTEX in Biella which provides professional training, research and technological experimentation to the textile industry and the Comitato Servizio Tendenze Moda in Empoli which provides professional training and information on fashion trends to local firms.¹⁶

Whether these institutions are relevant to Eastern Europe is debatable. Bianchi (1992) and Murray (1992), amongst others, suggest that capacities for collective action can be developed in Eastern Europe, *even where there is no tradition of inter-firm cooperation*. Bianchi (1992 p.94) argues that "social consensus is not self-evident, it must be acquired during the process of change". The interesting thing about the Danish programme is that it was successful, although there was no tradition of inter-firm cooperation. But in some other cases, attempts to cultivate cooperation between firms, where there has not been a long tradition of cooperation have been less successful. The critics such as Smith (1997) argue

that it is pointless, or even harmful given the fragile nature of social consensus in Eastern Europe, to attempt to "create" a collective culture in regions where there is no tradition of inter-firm cooperation. Smith (1997) argues that in Slovakia, for example, where there is not a strong tradition of inter-firm cooperation, attempts to nurture cooperative norms in two specific districts - Martin and Liptovsky Mikulas - have not worked: He states (at p.60) that in these two districts "forms of emerging regional specialisation do not appear to be leading to the establishment of local inter-firm cooperation. ... Firms tend to be similar in their production profiles, placing them in competitive positions for market shares rather than in cooperative relations with other local firms".

However, where collective norms are well entrenched the same problems do not exist. Thus, while Smith's (1997) research suggests that attempts to nurture inter-firm cooperation have not on the whole been successful in certain parts of Slovakia, other East European countries have regions or sectors which have long traditions of cooperative culture. To take one well-known example, studies of the second economy in Hungary indicate that it operates on the basis of informal networks and information sharing (see eg Joffe 1990, Bruszt & Stark 1992, Stark 1996). There are other cases. For example, Greif & Kandel (1995) report the existence of extensive informal contracting, based on reputation, between "business groups" in Russia. And a report in *The Economist*¹⁷ suggests that an industrial core of small and medium enterprises interspersed with larger firms, similar to Baden-Wurttemberg, is emerging in Thuringia, in the former G.D.R. Policies designed to promote public goods and sub-contracting between small and large firms could be expected to work well in situations like these.

Policies which are designed to promote capacities for collective action make a conscious attempt to influence the relevant choice variable for the firm - ie. the softness of the trading environment. However, the vision of new regionalism for post-socialist transformation suggested here is wider than the intentional creation of industrial districts. This is just the narrow agenda of the flexible

specialisation literature. The broader vision for new regionalism is about fostering new and diverse organisational forms which represent improvements on existing governance structures, at least given the imperfect realities which lie behind their development. "[T]he Chinese are not content with aspiring to match foreign achievements. They trumpet their intention to surpass the west by developing a 'socialist market economy with Chinese characteristics' and initiate bold experiments that involve genuine institutional innovation" (Rawski 1995 p.1171). T.V.Es show that transforming economies have the potential to develop governance structures which are not in the mould of existing organisational forms. As Aoki (1995 p.351) puts it: "[O]ne of the advantages of transitional economies is that they may be able to generate a diversity of organisational forms by the selective emulation of better organisational forms".

The previous two sections suggested that T.V.Es contain lessons for other (post) socialist countries. A controversial point is whether it is too late for big bang economies to change direction. Nolan (1995) takes a negative stance on this point. "Careful study of China's reform path would have been relevant to devising a reform strategy for [Russia] in the late 1980s. It is not much relevant [*sic*] to Russia's current situation. This requires thinking afresh from the present conditions. The 'Chinese solution' is no more an answer to Russia's current disastrous situation than were 'free markets' and 'democracy' an answer to the problems of the communist command system" (1995 p.302). This view might be too pessimistic. If the "Chinese solution" involved the simple transplant of T.V.Es' institutions to Eastern Europe it would be difficult to disagree with Nolan because the preconditions that make *them* work do not exist now in Eastern Europe (and didn't exist in the late 1980s). However, this is not the suggested course of action here and it is not what Nolan had in mind either.

The real issue is whether the *process*, rather the mechanics, can be relevant now, given the current situation in Eastern Europe. This is a different issue. As far as this goes, although it is controversial, there is at least one chain of thought

which suggests that economic crisis can be cathartic for the emergence of a new regionalism. For example, the EBRD (1992) report suggests that policies based on firm clustering seem particularly promising given the current situation in Eastern Europe. The argument is that in times of economic stability, politically it is difficult to get individuals to invest in long-term intangibles like capacities for collective action. "From this vantage point, local economic development may be more likely to occur in locales that have experienced economic upheaval ... and political dismantling, thereby laying an open foundation for a new economic order. ... New industrial spaces, thus, are not necessarily a matter of geographic shifts of economic activity from one region to another; rather they may emerge as a function of restructuring, predicably where an economy has faltered and local sociopolitical relations have been dismantled. Heuristically, and ironically, this suggests greater potential for socioeconomic restructuring among cities experiencing higher levels of poverty, unemployment, firm failures and so forth" (Ettliger 1994 p.160). This suggests that economic crisis can have a positive effect on the development of location-specific institutions.

8.5 CONCLUSION

The suggested lessons might seem modest (even banal). However, if their potential wider application is accepted, their combined effect challenges the dominant theoretical framework on post-socialist transition. The success of T.V.Es seem to contradict the central tenets of the big bang approach: (i) the importance of ironing out property rights and (ii) that a single "rigid" organisational form - the market with arms-length transactions - is superior in all circumstances. Nevertheless, the issue of whether the suggested lessons are relevant to other socialist and post-socialist countries is a controversial one. The existence of structural differences between China and Eastern Europe and, related to this, the fact that China possessed some undeniable initial advantages clouds the issue. The discussion is also couched in a suggestive fashion for a few reasons, the most important of which is that a sufficient period of time has

not elapsed to be absolutist about the relative merits of different strategies. This said, the relative performance of China compared with other transforming economies, in particular in Eastern Europe, to this point suggests that big bang advocates should at least be giving some consideration to the proposed lessons.

The ideas on new regionalism, in the second part of the chapter, at best, represent the skeleton of an alternative approach. The debate on post-socialist transition/post-socialist transformation tends to be labelled big bang versus gradualist. There is good reason to attempt to shift the debate outside these labels. Thus the rejection of big bang does not, in itself, suggest the wholesale acceptance of gradualism, as the terms are used in the literature, and vice-versa. The framework, posited above, stresses this through emphasising that both flexible and rigid institutional forms have their pluses in different circumstances. Nevertheless, if the approach had to be labelled, there are obvious parallels with gradualism. Most of the ideas, though, are suggestive rather than conclusive. This reflects the fact that the approach is novel, to the extent it differs from mainstream gradualism, and therefore underdeveloped, at least in the post-socialist transition/post-socialist transformation literature. A valid criticism of the regional literature is that it is conditional on a lot of factors and it does not have macro policies to provide the general environment. This manifests a tension between the market demand and trading environment stories and unresolved issues, in the literature, about which is dominant. The potential, nonetheless, might exist to link these ideas with other emerging dissident views, such as Post-Keynesian perspectives on post-socialist transformation (*eg* Knell & Yang 1992), to give the ideas a macro framework and more bite at a policy level.

CHAPTER 9

CONCLUSION

The thesis had two objectives. The first was to provide a theoretical and empirical contribution to the existing literature on T.V.Es. The second was to suggest that T.V.Es contain some general lessons for other (post) socialist countries and outline an alternative approach to post-socialist transformation through drawing on the literature on collective learning and regionalism.

9.1 THE THEORETICAL ASPECT OF THE THESIS

This thesis has suggested that the problem with the orthodox transition literature is that it cannot explain the success of China's economic reforms, particularly compared with the poorer performing East European economies. As Amsden *et al* (1996 p.276) put it, "the Chinese economy has grown very rapidly on the basis of heterodoxy while Eastern Europe's economies stagnated (or collapsed in the case of Russia) on the basis of orthodoxy". The problem is that the transition literature focuses on "completing the reform" meaning transition to the notional "pure" market. However, the process of post-socialist transformation in reality is a complex one. Thus simply prescribing a textbook method based on mass and immediate privatisation as a general blueprint for transition will not always be apposite. "U.S. style market institutions ... are not universally appropriate. In transitional economies, the functions performed by these institutions can and perhaps should be performed in alternative ways" (Leitzel 1997 p.52).

The problem with the orthodox literature is that it cannot explain the success of reform measures which have differed from its prescribed approach. The success of the Chinese reforms when compared with orthodox reform strategies proposed by institutions such as the World Bank is best summed up by Cui (1994). He states: "because China has violated a canon of market theory by not

privatising it may be said to have prospered by getting the property rights wrong". In chapter two it was suggested that in the Chinese case private property is reduced to one factor among many that potentially explain its high growth rate so that property rights cease to be a *theory* of transition. This point was emphasised in later chapters through concentrating on the experience of T.V.Es. In particular it was argued that a theory of transition which claims that unambiguous property rights is a precondition for successful reform cannot explain the success which T.V.Es have had with vaguely-defined ownership.

As a first step toward developing a rationale for different ownership forms, it was argued in chapter three that different theories of the firm reflect the heterogenous nature of the division of labour. The chapter focused on three different rationales for the firm - the market, hierarchies and collective learning paradigms; and two concepts of the division of labour - the detailed division of labour and the social division of labour. Two main arguments were put forward:

- (i) The detailed division of labour underpins the market-hierarchies paradigms and the social division of labour underpins the collective learning paradigm.
- (ii) The two concepts of the division of labour are reflected in different patterns of growth. The narrow endogenous growth treats the detailed division of labour as a defining growth path. The broad endogenous growth, on the other hand, can accommodate both the detailed division of labour and the social division of labour. It was tentatively suggested that different organisational forms reflect different trajectories. This provided the basis for the regional based explanation of T.V.Es in chapter five and the formal model in chapter six which explored the trade-offs between different paradigms of the firm in the context of T.V.Es.

The main theoretical contribution to the literature on T.V.Es was concentrated in chapters five and six. The model in chapter five draws on the literature on implicit contracts and reputation effects. The T.V.E was depicted as a strategic core which is supported through a series of informal institutions or strategic

alliances. The relationship between the T.V.E and political centre was also represented as a form of strategic alliance. It was argued that the political centre confers legitimate authority on the T.V.E sector and that the relationship between the T.V.E and the T.V.G forms a mechanism for solving collective action problems that build up around informal institutions. There are two main similarities between this model and most of the existing literature on T.V.Es. First, it focuses on traditional communal based T.V.Es with close ties to the T.V.G. Second, it provides a verbal rather than a mathematical theory of T.V.Es' institutions. However, it goes further than the existing literature in at least one respect. The first chapter suggested that there are two institutional features, which seem central to the success of T.V.Es. The first was the existence of informal institutions. The second was the concept of social embeddedness. The model, in chapter five makes these institutional factors the central focus of the explanation. In doing so it provides an explanation which takes into account *both* informal institutions and the widespread existence of T.V.E regional networks.

The model in chapter six suggests that with an increase in the size of T.V.Es and breadth of T.V.E contracting, economies of specialisation due to formal exchange will increase relative to economies of collective learning due to informal exchange. The effect which an increase in the number and size of firms has on the trade-off between specialisation and collective learning was broken down into labour and substitution effects. The model suggested that with larger numbers there is an increase in the degree to which contractual rights are certain. It was argued that this is due to the substitution effect, while the labour effect promotes both economies of collective learning and economies of specialisation. This represents a departure from the existing literature on T.V.Es in a couple of ways. The first is that it attempts to model both the evolution of hierarchical T.V.Es and the trade-offs which occur as T.V.Es extend outside localised regions. The evolution of hierarchical T.V.Es, with some similarities to

the state-owned sector, is a phenomena which has been recognised at an intuitive level for some time in relation to the larger, often coastal, T.V.Es, but hasn't been modelled before. The second is that the trade-offs between collective learning and specialisation inherent in this process are formalised in mathematical terms. While the actual model in chapter six is a simple one, development of the ideas in mathematical terms differs from most of the previous theoretical literature which has generally been at the level of verbal reasoning.¹

9.2 THE EMPIRICAL ASPECT OF THE THESIS

The empirical contribution in chapter seven, is a modest one. The chapter sets out two sets of regressions which tested propositions related to the theoretical models in chapters five and six. The model in chapter six suggested that there are similarities between the J-mode and T.V.Es. A well-documented feature of the J-mode is the close relationship between PROFIT and workers' share. The first set of regressions tested the relationship between PROFIT and workers' share in T.V.Es. Two proxies were used for PROFIT - profit per 1000 yuan revenue and profit per 1000 yuan fixed assets. The proxy for workers' share (INCOME) was wages per 1000 yuan revenue. These regressions used pooled cross-sectional and time series data for the period 1987-1991 and 1993 inclusive. The second set of regressions considered the connection between the importance of the T.V.G and the degree of worker socialisation. This tested the speculative argument in chapter five, that the role of the T.V.G, as a mechanism for solving collective action problems, diminishes with increased worker socialisation. These regressions used cross-sectional data on industrial T.V.Es for 1987 and pooled data on T.V.Es as a whole for 1989-1991 inclusive.

The empirical results were of mixed standard. This, in part, reflected the ad hoc

nature of the regressions, but it also reflected the primitive nature of some of the proxies. The results, nevertheless, gave some support for the arguments in the theoretical chapters. The finding, in the first set of regressions, that there was a strong relationship between the profit rate and workers' share is strong evidence that T.V.Es come close to the J-mode. The results for the size variable, in both sets of regressions, suggest that in larger T.V.Es (a) workers' share tends to be more market determined meaning communal considerations are less important and (b) the detailed division of labour increases in importance relative to the social division of labour. The results for T.V.G, in the second set of regressions, are far from conclusive, but, taken as a whole, give some support to suggestions that, in the main T.V.E provinces, the role of the T.V.G as a monitor on collective norms diminishes with worker socialisation. None of these results provide direct verification of the theoretical models in chapters five and six. However the results are both consistent with, and supportive of, their central propositions.

9.3 AN ALTERNATIVE APPROACH TO POST-SOCIALIST TRANSFORMATION?

The more speculative objective was to suggest that (i) T.V.Es contain lessons for other transforming countries and (ii) T.V.Es illustrate an alternative approach to post-socialist transformation based on a collective learning theme. The last chapter stressed the provisos attached to these suggestions and hence their tentative nature. The main objection to attempts to generalise lessons from T.V.Es is the big bang perspective that there are structural differences between China and other (post) socialist countries - in particular in Eastern Europe. The last chapter outlined a few objections to this argument. The main objection was to the notion that there is a normal path of development. The problem with arguing that China's success is due to its relative "backwardness" and the related fact that it is coming off a lower base than Eastern Europe is that China has outperformed all developing countries with similar economic structures.

There were some initial advantages in China which were not present in Eastern Europe so even if the countries in Eastern Europe had adopted a different approach there is nothing to suggest that their growth rates would have been as spectacular. Nevertheless the fact that the performance of T.V.Es is an important reason for China's economic growth and China has performed better than countries with similar structural advantages suggests that T.V.E success might be due to systemic features which contain general lessons for other economies.

This thesis has drawn on a number of different areas of economics which means that some selective treatment and/or simplifications are inevitable. This is particularly true of the manner in which the concept of new regionalism has been used in the thesis. There are quite a few well-known criticisms of the flexible specialisation literature - some of which are well-founded, but others of which are not. However, even the valid shortcomings do not change the fact that there are aspects of flexible specialisation which make a positive contribution to understanding a broader literature on collective learning. The vision for regionalism, at least in the manner in which the term has been used in this thesis, is wider than just flexible specialisation. It shifts the emphasis from a general model to focus on the specific circumstances that face individual economies undergoing transformation. "The approach assumes no determined path of regional development, but rather allows for changes in each phase as a result of strategic modifications to industry" (Sternberg 1996 p.525). This provides for multiple paths for reform which recognise and nurture path dependent differences between and within countries. The fact that in a narrow sense reasonable doubts have been expressed about the micro-foundations and empirical basis of flexible specialisation in specific cases does not affect the validity of these ideas as a general approach to post-socialist transformation.

A general theme which runs through the thesis is that T.V.Es are a specific

example of a broader collective learning literature. The central feature of an alternative vision for post-socialist transformation is recognition of the existence of diverse organisational forms and that distinctive strategies might be needed to get the best out of a range of potential governance structures. As Nolan (1995 p.317) suggests: "A wide variety of property rights regimes can now be seen to be compatible with effective economic performance. In between 'all people' and individual private ownership is a great variety of property rights arrangements, which may be more or less compatible with strong incentives for managers of those assets to use them effectively to earn income and expand the value of the resources under their disposition". Boisot & Child (1996 p.50) make a similar point: "The highly complex forms of property rights in China have prompted the realisation that 'property rights' do not constitute a simple binary set of possibilities - state versus private. Instead, they may incorporate a bundle of rights, relating to such diverse matters as the appointment of managers [and] determination of output mix". The thesis has attempted to first provide a theoretical basis for the existence of less than arms-length property rights structures and second place them in a theoretical context where their existence is compatible with state and full private ownership as an entity in their own right.

The notion that different concepts of the division of labour underpin diverse organisations is novel in the literature and therefore, it was developed in a fashion that is far from conclusive and at times tended to be speculative. This is reflected in the fact that the main points are reflected in a series of abstract propositions which are based on stylised facts. However, if valid, it supports the notion that there is no *a priori* justification for a particular ownership form. Instead, post-socialist transformation is consistent with a range of organisational forms dependent on prominent factors in the collective learning literature like the degree of trust in the transaction and the form of market demand. In chapter three it was argued that the social division of labour can support a wide range of

flexible less than arms-length organisational forms consistent with collective learning. The detailed division of labour can support more rigid organisational forms such as full private ownership and hierarchies including state ownership.

9.4 SUGGESTIONS FOR FURTHER RESEARCH

1. Further theoretical investigation using less stylised depictions of T.V.Es

Consistent with previous theorising about the Chinese non-state sector, the two models in chapters five and six rely on a highly stylised depiction of T.V.Es' institutions. To some extent, there is a necessary trade-off in attempting an exercise like this between, on one hand, developing a rigorous theoretical framework and, on the other, accurately describing what actually exists. In attempting to state the theoretical arguments as succinctly as possible some simplifications and generalisations are inevitable. For most purposes the broad brush description of T.V.Es in chapters four to six summarise fairly the basic features of T.V.Es. However, the potential exists for future research to address aspects of T.V.E ownership which the models in this thesis ignore. For example the models focus on the sunan pattern of ownership and do not address other variants such as the Wenzhou model. Thus one important issue for future research might be to investigate why some T.V.Es are private and others are collective. Future research along these lines could investigate whether this is just a path dependent outcome reflecting the fact that some regions such as Wuxi have strong traditions in collective ownership or is it related to different patterns of growth and/or forms of market demand in a more systematic way.

2. Further empirical investigation of T.V.E behaviour using better data sets

The empirical results in this thesis using aggregate data are supportive of the theoretical arguments, but are limited in their scope because of reasonable concerns about the interpretations on some of the proxies. Further empirical research using panel data is needed to clarify existing ambiguities - for example in interpreting the T.V.G and IMM variables in the second set of regressions. It

would be difficult, if not impossible, for future research to provide direct tests of either of the theoretical models even using panel data because the variables are not readily quantifiable. However, field research could shed light on issues such as the relationship between the political centre and T.V.E sector over time and the role of the T.V.G in this process. The extent and implications of an extended T.V.E sector also needs further empirical investigation including the proposition that the external contracting of T.V.Es is similar to the J-mode. This thesis has focused on the relationship between PROFIT and workers' share in T.V.Es to test this proposition, but there are other aspects of T.V.Es and the J-mode that need further empirical and theoretical investigation - for example the perceived similarities and differences between the roles of the T.V.G and the "main bank". The main bank represents the interests of the major shareholders - analogous to syndicate banking. One issue touched on in this thesis that requires further research is whether the ownership-control relations in the extended T.V.E sector are developing in this direction where T.V.Gs perform similar roles for T.V.Es.

3. Further theoretical and empirical investigation into the broader application of regionalism as an alternative approach to development in Eastern Europe

The potential relevance of regionalism as a solution to the problems posed by post-socialist transformation in Eastern Europe is a third issue that requires further investigation. This thesis has suggested that the collective learning literature presents a possible path forward and has made some speculative arguments along these lines. However, more empirical and theoretical research is needed to either verify or reject the validity of this approach in the context of the circumstances facing particular countries. There is a significant literature on the pros and cons of regional development in Western Europe, but more research needs to be done on the potential for (i) regional development and (ii) the evolution of diverse organisational forms in Eastern Europe.² One aspect that deserves particular attention in future research on regional development in Eastern Europe is how to overcome the problems which the lingering effects of a "U-form" planning structure pose. In this context the challenge is to develop a

regional approach that does not set out to down-size enterprises *per se*, but provides a framework where diverse organisational forms (large-scale firms and small and medium sized enterprises) can co-exist in an evolving environment.

APPENDIX

DIAGNOSTIC TESTING ON THE REGRESSIONS IN CHAPTER SEVEN

Various diagnostic tests were performed on the Cochrane-Orcutt transformation (regression (i) in table 7.4) to check for the existence of multicollinearity and heteroscedasticity. The results are given below in table A1. Three different tests for multicollinearity are given. The first is the pairwise correlations between independent variables. A number of rules of thumb exist for deciding when multicollinearity becomes a problem. Gujarati (1988 p.298) suggests that if any of the pairwise correlations are in excess of .8, then multicollinearity is a serious problem. The highest value, was .28 so according to that criteria multicollinearity is not a problem here. However, simply examining pairwise correlations has some limitations. First, rules of thumb such as the pairwise correlations should not be higher than .7 or .8 are unsatisfactory. They do not show the extent to which the efficiency of the parameter estimates are affected (Schmidt & Muller 1978 p.272) nor do they provide any quantitative measure of the impact of multicollinearity on the results (Neter, Wasserman & Kutner 1990 p.408). Second, examining pairwise correlations amongst regressors is, at best, an informal measure of multicollinearity. Where the regression involves more than two independent variables, Gujarati (1988 p.300) points out that simple correlations do not provide an infallible guide to the presence of multicollinearity.

Therefore, the variance inflation factors for each independent variable and the condition index are given to check the conclusions based on pairwise correlations. Gujarati (1988 p.301) states that if the condition index is between 10 and 30 there is moderate to strong multicollinearity and if it is in excess of 30 there is severe multicollinearity. Chatterlee and Price (1991 p.195) suggest that remedial action is needed if the condition index is greater than 30. However, the condition index for our sample was 1.63 which indicates that multicollinearity is not a concern. The variance inflation factors reinforce this

view. The variance inflation factors range in value between 1.02 and 1.11, but Chatterjee and Price (1991 p.198) state that multicollinearity is a problem if the largest variance inflation factor exceeds 10. Thus, the three measures - pairwise correlations, the condition index and the variance inflation factors - support the conclusion that multicollinearity is not affecting the sample.

The Goldfeld-Quandt test was used to test for heteroscedasticity. T.V.Es are diverse across provinces making it reasonable to *a priori* expect that heteroscedasticity might be present. Given the substantial diversity that exists in size, in particular between coastal and interior provinces, I postulated that possible heteroscedastic variance might be positively related to SIZE. There is also the fact that SIZE (Total Revenue/Total Number of Firms) has an element of regression of the dependent variable upon itself. There is some difference of opinion as to the number of central observations which it is appropriate to delete in conducting the Goldfeld-Quandt test. Goldfeld & Quandt (1972) recommend that 8 observations should be deleted if the sample size is 30 and 16 observations be omitted if the sample size is 60. Judge *et al* (1982), though, suggest that omitting 4 observations if the sample size is 30 and 10 observations if the sample size is 60 is sufficient. The sample size used in the Cochrane-Orcutt transformation, however, was 140. Therefore, consistent with Judge *et al* (1982) the central 20 observations of SIZE were omitted and regressions were run on the first 60 and last 60 observations. This gave 55 degrees of freedom. Tables for the F statistic do not give values for 55 degrees of freedom, but the critical F value for 60 numerator and 60 denominator (which is a more stringent test than 55 numerator and 55 denominator) is 1.84. Since the estimated F value (.731) is less than 1.84 we can reject the hypothesis that there is heteroscedasticity in the error variance. This suggests that variance in SIZE is unrelated to groupings into province despite size differences across provinces.

TABLE A1
Various Diagnostic Tests on the Cochrane-Orcutt Transformation
(regression (i) in Table 7.4)

<u>Multicollinearity</u>				
Pairwise Correlations				
	PROFIT	SIZE	EDUC	MALE
PROFIT	—			
SIZE	-.18	—		
EDUC	.02	-.06	—	
MALE	.03	-.05	.21	—
ECONOMIC	-.06	.28	.03	-.02
<u>Condition Index</u> = 1.63				
<u>Variance Inflation Factors</u>				
PROFIT=1.02 SIZE=1.11 EDUC=1.02 MALE=1.02 ECONOMIC=1.06				
<u>Goldfeld-Quandt Test</u> F(55,55)=.731				

SIZE was used in the Goldfeld-Quandt tests in the second series of regressions (T.V.G-socialisation). The number of omitted variables varied with sample size.

TABLE A2
Various Diagnostic Tests on the regressions in Table 7.7

TESTS ON REGRESSION (1)

<u>Multicollinearity</u>		
Pairwise Correlations		Condition Index =1.48
	PROFIT	SIZE
PROFIT	—	
SIZE	.18	—
T.V.G	.01	.03
Variance Inflation Factors		
PROFIT=1.14 SIZE=1.13 T.V.G=.98		
<u>Heteroscedasticity</u>		
Goldfeld-Quandt Test F(29,29)=.812		

TESTS ON REGRESSION (2)Multicollinearity

Pairwise Correlations			Condition Index =1.51
	PROFIT	SIZE	
PROFIT	—		
SIZE	.21	—	Variance Inflation Factors
T.V.G	.01	.05	PROFIT=1.16 SIZE=1.16 T.V.G=.98

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.52

TESTS ON REGRESSION (3)Multicollinearity

Pairwise Correlations			Condition Index =1.50
	PROFIT	SIZE	
PROFIT	—		
SIZE	.37	—	Variance Inflation Factors
T.V.G	.05	.03	PROFIT=1.01 SIZE=1.01 T.V.G=.98

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.875

TESTS ON REGRESSION (4)Multicollinearity

Pairwise Correlations			Condition Index =1.25
	PROFIT	SIZE	
PROFIT	—		
SIZE	.39	—	Variance Inflation Factors
T.V.G	.05	.10	PROFIT=1.02 SIZE=1.03 T.V.G=.98

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.77

TABLE A3**Various Diagnostic Tests on the regressions in Table 7.8**TESTS ON REGRESSION (1)**Multicollinearity**

Pairwise Correlations			Condition Index =1.20
	PROFIT	SIZE	
PROFIT	-		
SIZE	.18	-	Variance Inflation Factors
T.V.G	.01	.03	PROFIT=1.00 SIZE=1.01 T.V.G=.97

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.825

TESTS ON REGRESSION (2)**Multicollinearity**

Pairwise Correlations			Condition Index =1.25
	PROFIT	SIZE	
PROFIT	-		
SIZE	.20	-	Variance Inflation Factors
T.V.G	.01	.06	PROFIT=1.10 SIZE=1.24 T.V.G=.99

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.72

TESTS ON REGRESSION (3)**Multicollinearity**

Pairwise Correlations			Condition Index =1.72
	PROFIT	SIZE	
PROFIT	-		
SIZE	.39	-	Variance Inflation Factors
T.V.G	.03	.03	PROFIT=1.15 SIZE=1.15 T.V.G=1.00

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.872

TESTS ON REGRESSION (4)Multicollinearity

Pairwise Correlations			Condition Index = 1.51
	PROFIT	SIZE	
PROFIT	-		
SIZE	.39	-	Variance Inflation Factors
T.V.G	.03	.06	PROFIT=1.15 SIZE=1.15 T.V.G=.98

Heteroscedasticity

Goldfeld-Quandt Test F(29,29)=.80

TABLE A4
Various Diagnostic Tests on the Regressions in Table 7.9

TESTS ON REGRESSION (1)Multicollinearity

Pairwise Correlations				Condition Index= 3.72
	PROFIT	SIZE	T.V.G	
PROFIT	-			
SIZE	.70	-		Variance Inflation Factors
T.V.G	.41	.41	-	PROFIT=1.90 SIZE=2.62 T.V.G=1.06
IMM	.70	.80	.41	IMM=2.66

Heteroscedasticity

Goldfeld-Quandt Test F(4, 4) = 6.5

TESTS ON REGRESSION (2)Multicollinearity

Pairwise Correlations			Condition Index= 2.59
	PROFIT	SIZE	
PROFIT	-		
SIZE	.70	-	Variance Inflation Factors
T.V.G	.41	.41	PROFIT=1.82 SIZE=1.81 T.V.G=1.11

Heteroscedasticity

Goldfeld-Quandt Test F(5, 5) = .639

TESTS ON REGRESSION (3)Multicollinearity

Pairwise Correlations

Condition Index= 3.70

	PROFIT	SIZE	T.V.G
PROFIT	—		
SIZE	.17	—	
T.V.G	.17	.41	—
IMM	.40	.80	.41

Variance Inflation Factors

PROFIT=1.15 SIZE=1.15 T.V.G=1.00
IMM=2.93HeteroscedasticityGoldfeld-Quandt Test $F(4, 4) = .455$ TESTS ON REGRESSION (4)Multicollinearity

Pairwise Correlations

Condition Index= 1.60

	PROFIT	SIZE
PROFIT	—	
SIZE	.17	—
T.V.G	.17	.41

Variance Inflation Factors

PROFIT=.934 SIZE=1.08 T.V.G=1.08

HeteroscedasticityGoldfeld-Quandt Test $F(5, 5) = .938$

ENDNOTES

ENDNOTES TO CHAPTER ONE

1. When the term "Eastern Europe" is used in this thesis it is inclusive of the transition economies in Central Europe and the former U.S.S.R.
2. Statistics on rural enterprises were only published from 1984. The real figures are deflated using gross output implicit price deflators. All of these statistics are presented more fully in figure and table form in chapter four.
3. However, in the last couple of years the realisation in many quarters that the reforms in Eastern Europe will take longer than first thought has led to more widespread criticism of this approach than in the past. The articles collected in a special issue of *The Journal of Economic Perspectives* (1996) vol.10(2) is representative of this change in thinking. Comments by Brada and Rapaczynski are illustrative of the general thrust of views expressed in that issue. Rapaczynski (1996 p.87) states: "The experience of post-communist countries in Eastern Europe is a good reminder that economists tend to assume a can opener when one is needed. Indeed the statement that 'property rights must be put in place' assumes away one of the most intricate and interesting questions concerning economic development". Brada (1996 p.84) writes: "The experience of transition economies [suggests] that grand designs for privatisation cannot be drawn up, and any country wishing to make significant progress in privatisation must employ a range of methods".
4. For criticisms of this approach see Nolan (1995) and Chang & Nolan (1996). These criticisms are discussed in detail in chapter eight.

ENDNOTES TO CHAPTER TWO

1. In this thesis institutions are defined broadly to include (i) organisations - which is a common definition in Williamson's writings and (ii) norms and rules - which is a common definition in North's writings. The latter tends to be overlooked by property rights theorists like Alchian & Demsetz (1972).
2. Madsen Pirie "The Anglo- Saxon Model" - lecture given at a conference entitled "Different Models of Capitalism" held at L.S.E 15 November 1995. Pirie suggests that the Anglo-Saxon model rests on, what he refers to as, two "strands" - the adversarial and evolutionary principles..
3. From a different perspective the people might be the principal and the central leadership just an agent because while the central leadership bears the political risk, the people bear the economic responsibility. As Cauley & Sandler (1992 p.40) note: "There are a number of ways to characterise the principal-agent problem with respect to the Chinese economic system. The appropriate characterisation depends upon the purpose of the researcher and whether viable insights can be garnered".
4. The relationship between state and society is complex. Hence, a possible objection is that the dichotomies which both North and Haggard draw do not do justice to the issues involved. For more general theories of the state it is necessary to look outside economics - eg Poulantzas (1982).
5. There are reports suggesting that cadres at different levels might prefer private ownership. The *guandao* and *xiahai* campaigns mentioned in the text are two examples. There are also reports detailing the business dealings of Deng Xiaoping's own family (see eg *The Australian Financial Review* May 5 1995 *The Age* May 12 1995) and the "new capitalist elite" with close ties to the government (see eg *Business Week* June 5 1995).

6. There are really two evolutionary traditions. One is individualistic emphasising information and exchange. The other is collective emphasising knowledge and production. However, it is common for writers on evolutionary economics to blur the boundaries and draw on both traditions - sometimes in the same article or book, but more often in different writings. Nelson & Winter (1982) is an example in the broader literature. Murrell's selective use of evolutionary economics in various articles is illustrative in the context of writings on post-socialist transformation. The following focuses more on the individualistic tradition.
7. The reasoning here resembles Olson's argument that politics is vulnerable to small-group sectional interests (see eg Olson 1993).
8. For a recent overview of these arguments see World Bank (1996).
9. Although Jefferson *et al* (1996) in a recent article using a new data set for the period 1980 to 1992 cast doubt on the reliability of earlier studies. Their conclusion (at p.170) is: "Our initial calculations, like the results of other studies, show T.F.P growth in collective industry consistently outpacing T.F.P gains in the state sector, often by large margins. These findings are not robust. ... In the absence of a careful review of the price and output data used to analyse productivity, the conclusion that China's collective industries have raised total factor productivity more rapidly than state-owned industrial enterprises cannot be firmly established".
10. The labels "Anglo-Saxon model", "German model" and "Japanese model" are adopted from the titles of three lectures given at the conference mentioned in endnote 2. I am not suggesting that these labels are the only way to categorise the models to which they refer nor that they are the

only models of capitalism that exist. Moreover I am not suggesting that everybody would agree on what the "Anglo-Saxon" model, the "Japanese model" and the "German model" actually are. There is widespread disagreement on this point. My intention is to simply point out that there are different models of capitalism rather than a model of capitalism.

11. For a somewhat similar treatment of the issues in this section see Putterman (1995a). At least much of the same ground is covered.
12. Kung (1995) surveyed the attitudes of 400 farmers in four counties in Hunan and Sichuan. One of the things which he asked the peasants about was their confidence in contractual agreements with village authorities. In response to the question: Will contracts be prematurely terminated? 88% of the sample answered no. In response to the question: Will you be able to get the same plots of land in the next contract? 82% of the sample said yes (see Kung 1995 table 17).
13. This is particularly true in the developed coastal provinces. For example, Knight & Song (1993 p.194) note: "in Wuxi [Jiangsu] land is left untended because household income is maximised by wage specialisation".
14. The overview of enterprise reforms draws on Lo (1997 pp.84-85).
15. There has been a moderate escalation in the number of S.O.E bankruptcies since 1994. The figures for 1990 to 1996 are as follows:

1990	32
1991	117
1992	428
1993	710
1994	1625

1995 2,200

1996 (Q₁-Q₃) 3,400

SOURCE: *Xinxi Shibao* (Information Times) October 16 1996 p.1

16. The proportion of loss making state-owned enterprises (covering township and above independently accounting industrial enterprises) according to *Zhongguo gongye jingji tongji nianjian* 1993 and 1994 editions were:

1990	27.6%
1991	25.8%
1992	23.4%
1993	28.8%

These figures and those for other years are given in table 4.8 below.

17. From this perspective the point is not whether S.O.Es are performing as well as non-S.O.Es. The issue is (i) whether S.O.Es are reformable - ie. capable of making a positive contribution to the economy as a whole and (ii) whether their economic role can be substituted by non-S.O.Es.
18. A recent example of an institutional irregularity concerns the issue of "A" and "B" shares on the Shanghai stock exchange. "A" shares are denominated in yuan and intended for Chinese investors. "B" shares are denominated in \$US and intended for overseas investors. However, local investors have been investing in "B" shares. A report states: "Regulations still clearly bar local Chinese from buying B shares. But in China, the important thing often is which regulations governments choose to enforce" - "Chinese Bend Stock Rules - Investors Play Cat and Mouse With Regulators" *International Herald Tribune* December 13 1996 p.19.

ENDNOTES TO CHAPTER THREE

1. What I call the "A-mode" corresponds in Aoki (1990) to the "H-mode". The following represents a stylised depiction of the dominant view of the J-mode. For an alternative dissenting view of the J-mode see Miwa (1996).
2. This poses an interesting question: Why are banks willing to take on the burden associated with the debt dominated J-mode? In part the answer seems to be that the main bank method works best when there is high growth and few financial problems. This has been the case in Japan, at least until recent times, but it is not clear what effect the slower growth rates of recent years will have on the potential soft budget constraint. As a result of slower growth rates in recent times questions have been raised about the effects of growing bad debts. For example see G. Baker "Collapse that may force Japan to put its house in order" *Financial Times* March 19 1996 p.6; G. Baker "Japan's banks make progress in debt mountain" *Financial Times* May 25-26 1996 p.6; J. Sapsford "Market Fall Threatens Japanese Banks" *The Asian Wall Street Journal* January 9 1997 p.1 and Japanese Finance *Financial Times* Survey March 25 1997.
3. The concept of the J-mode as a "community of people" where the shareholder, like the banks, are just one group is stressed by Ronald Dore in an address called "The Japanese Model". This address took place at a conference entitled "Different Models of Capitalism" which was held at L.S.E 15 November 1995. These ideas are also reflected in recent debates in the U.K about "stakeholder economies". The potential for U.K companies to emulate the J-mode were summed up in one newspaper comment as follows: "Capitalism is generally equated with individualism: market forces are said to require well entrenched and well defined rights in private property. Yet most successful market economies

are far from being individualistic societies. ... Commentators looking at [Japan] find it difficult to identify quite where economic or political power lies. The structure of the Japanese corporation is complex, tacit and even incoherent. ... The U.K cannot simply emulate Japan. Markets operate within a social framework which is the product of each country's culture and history". J. Kay "Social life of the markets" *Financial Times* Jan. 7 1996 p.22. These comments reflect the importance of path dependence.

4. Dosi *et al* (1990) is a good example. This is a book which is over three hundred pages long, but neither Williamson nor Chandler appears in the author index and neither writer is cited in the references at the end.
5. Aoki (1994), in a later paper hints at this possibility. He writes (at p.27): "One might tentatively hypothesise ... that the stylised Japanese firm and the stylised Western firm may be on *different equilibrium paths* in their relationship with factor markets and in internal structuring, setting aside for a while the problem of whether those paths are convergent or distinct" (emphasis mine). He then asks (at p.27): Why are there different equilibrium paths, *ie.*, why are there different systematic sets of attributes of the firm?" However, Aoki goes on to consider another point and does not answer this question (in the context of growth paths) in the paper.
6. Solow sums up the achievements and limitations of the narrow endogenous growth: "Growth theory was invented to provide a systematic way to talk about and compare equilibrium paths for the economy. In that task it has succeeded reasonably well. In doing so, however, it failed to come to grips adequately with an equally important and interesting problem: deviations from equilibrium growth" (Solow 1988 p.311).

7. Kaldor was a student of Young's at L.S.E . Blich (1990) examines the lecture notes Kaldor took in Young's classes and compares them with Kaldor's later writings. He shows that Young's lectures had a significant influence on Kaldor. Blich (1990) reports that Kaldor's lecture notes consisted, in effect, of the main ideas that made up Young's 1928 paper. The influence of Young on Kaldor - in particular Kaldor's cumulative growth model - is also discussed in Boyer & Petit (1991) pp.488-489.

ENDNOTES TO CHAPTER FOUR

1. T.V.Es were distinguished from rural enterprises in chapter one. The term "T.V.E" is used in this thesis to refer to T.V.Es, affiliated with a township or village government - ie. xiang (township) and cun (village). The broader term - rural enterprises - is used here to refer to rural, non-state, non-agricultural enterprises. The term "rural enterprises" covers both T.V.Es (as defined above) and various "below village" categories such as co-operatives, partnerships and private and individual firms.
2. Jiang Zemin's comments are reported in *Nongmin Ribao*, Beijing, in Chinese, 10 December 1996 p.1. Text reproduced in *Summary of World Broadcasts, Part 3, Asia and the Pacific* February 15 1997.
3. For more detailed discussions of regional variations in T.V.Es see Svejner & Woo (1990), Ody (1992), Watson & Wu (1994), Weitzman & Xu (1994), Goodhart & Xu (1995), Whiting (1995) and Yang & Wei (1996).
4. Some sense of the growing number of successful T.V.Es in Guangdong comes through in articles such as: "Rich Townships Spring up in Guangdong" [Transcribed Text], Beijing, XINHUA (in English) GMT November 21, 1994, FBIS-CHI-94-224, November 21, 1994.

5. Huadu, in Wuxi, is discussed in Dai Yannian "Huadu: Integration of Towns and Country" *Beijing Review* November 21-27, 1994, pp.14-18.
6. For example Jing Wei "Revisiting Huaxi Village" *Beijing Review* May 10-16 1993 pp.13-17 and Han Baocheng "Development Strategy for Central and Western Regions" *Beijing Review* April 19-25 1993 23 at p.24.
7. Wuxi is discussed *inter alia* in "Rural Enterprises Thrive in Jiangsu's Wuxi" [FBIS Translated Text"], Beijing XINHUA domestic service (in Chinese) GMT September 26 1994, FBIS-CHI-94-193, October 5 1994.
8. See Liang Hong "Zhangjiagang: A Miracle of Urban Development" *Beijing Review* February 19-25, 1996. See also Shi Lihong "Rural Revolution Improves Village Life" *China Daily* January 2, 1996 p.10.
9. "A Decision Regarding the Development of Rural Forestry and Agricultural Subsidiary Production" - see Whiting (1995) p.86.
10. This paragraph draws on Whiting (1995 pp.89-92). For a good discussion of these issues in the context of Wujiang County - see Shen (1990).
11. This figure is calculated as follows. Wong (1991 pp.186-187) estimates that (i) state grants under the categories of special funds for the five small industries and aid to people's communes contributed 7 billion yuan, (ii) special allocations during the fourth Five-Year Plan (1970-1975) for building key projects in the five small industries - chemical fertilisers, farm machinery, iron and steel, cement and energy - contributed 8 billion yuan, and (iii) bank loans providing working capital contributed 20 billion yuan.
12. See Wong id:187-191 for elaboration on "informal methods".

- 13 Han Baocheng "Readjustment Improves Rural Enterprises" *Beijing Review* 27 August - 2 September 1990 p.18
14. These regulations are discussed in Xu (1995 chap.2).
15. This statements is reported in Byrd & Lin (1990a p.11)
16. ibid
17. *Xinhua* news agency domestic service, Beijing, in Chinese, 0946 GMT 29 October 1996. Text reproduced in *Summary of World Broadcasts, Part 3, Asia and the Pacific* November 2 1996.
18. *Zhongguo nongcun jingji* (August 1995).
19. *Zhonghua Gongshang Shibao* (China Industry and Commerce Times) March 19 1997 p.4
20. Xi Mi "Who Really Owns the Township Enterprises" *China Daily* June 6, 1994, p.4.
21. This is similar to S.O.Es - see Byrd (1991)
22. PRC Ministry of Agriculture "A View on Reforms in the Property Rights of Town and Township Enterprises as at April 1 1994" [Text], Beijing, NONGMIN RIBAO (in Chinese) April 14 1994 p.4, "Article on Rural Enterprise Property Rights" FBIS-CHI-94-097 May 19 1994.
23. Xi Mi "Who Really Owns the Township Enterprises" *supra* note 20

24. For official statements see "Tian Jiyun Calls For Township Enterprise Shareholding" [Text], Beijing, ZHONGGUO XINWEN SHE (in English) GMT September 16 1993 FBIS-CHI-93-180 September 20; PRC Ministry of Agriculture "A View on Reforms in the Property Rights of Town and Township Enterprises as at April 1 1994" *supra* note 22. However, local officials might have a vested interest in overstating the need for shareholding enterprises. For example there are reports from Guangdong suggesting that some T.V.Gs have become current profit maximising. Their objective is to raise current profits in order to sell successful T.V.Es to foreign capital. These attempts are being resisted by communal welfare-oriented managers and workers in the T.V.Es.
25. Xi Mi "Who Really Owns the Township Enterprises" *supra* note 20.
26. Statistics on rural enterprises were published from 1984 when below village categories were added to T.V.Es. The 1978 figures are for T.V.Es.
27. Statistics for commerce and transportation were not available.
28. The Working Conference is discussed in Jing Wei "Township Enterprises Boom in Ethnic Minority Areas" *Beijing Review* December 20-26 1993.
29. The eastern zone covers Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Hainan and Guangxi. The central zone: Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan; and the western zone: Sichuan, Guizhou, Yunnan, Shaanxi, Tibet, Gansu, Qinghai, Ningxia and Xinjiang.
30. This statement is reported in Jing Wei *supra* note 28

31. A "Decision on Accelerating the Development of Township Enterprises in Central and Western Regions" is considered in more detail in Han Baocheng "Development Strategy for Central and Western Regions" *Beijing Review* April 19-26 1993. Also see Wu Yunhe "Rural Firms to Continue Rapid Development" *China Daily* September 20 1993 p.1
32. The article in *Nongmin Ribao* supra note 2 states that in 1996: "The central and western regions markedly accelerated their development; regional gaps with regard to township enterprises were shrinking. An important reason in this regard was that East-West cooperation on township enterprises produced some effects, and East-West cooperation has now become a new point of economic growth in the development of township enterprises in the central and western regions". China's central and western regions grew faster than the eastern region during January-May in 1996. Growth in investment in capital construction and technological renovation (year on year) was 15.6% in the central region, 13.41% in the western region and 6.85% in the eastern region. *Xinhua* news agency, Beijing, in English 0811 GMT 26 June 1996. Text reproduced in *Summary of World Broadcasts, Part 3, Asia and the Pacific* July 3 1996. Between January and June 1996 the industrial value added in the central zone increased by 107.2 billion yuan. This was 30.5% higher than the corresponding figure for January to June 1995. It was 7.8% higher than growth in industrial value added in the eastern zone and 6% higher than the growth rate in the western zone. *Renmin Ribao*, Beijing, in Chinese, 9 August 1996 p.1. Text reproduced in *Summary of World Broadcasts, Part 3, Asia and the Pacific* August 27 1996.
33. Xu Yuanchao "100 Million Will Shift From Farming to Industry" *China Daily* September 4, 1987 p.1

34. "Township Firms Propel China's Economic Growth" *China Daily* February 15 1997 p.4.
35. The survey was carried out by the State Environmental Protection Bureau and the State Statistical Bureau in 1991. The results are reported in *Summary of World Broadcasts, Part 3, The Far East* January 1 1992.
36. Xia Zifen (ed) *Shanghai xiangzhen qiye jingji keji fazhan zhanlue he zhengce wenti yanjiu* (Research on Problems Concerning the Strategy and Policy for the Economic and Technological Development of Township and Village Enterprises in Shanghai) (Shanghai: Shanghai shehui kexue yuan chubanshe, 1988) p.53 referred to in Ho (1995 p.375).
37. Yan Yinglong "Lun Sunan xiangzhen gongye fazhan zhong de huanjing baohu wenti" (On the Problems of Environmental Protection in the Process of Rural Industrialisation in Sunan) *Jiangsu jingji tantao* (*Jiangsu Economic Inquiry*) 1988 no.6 p.29 referred to in Ho (1995 p.375).
38. "Polluting Industries Endanger Rural Areas" *China Daily* October 13 1988 p.3
39. *Xinhua* December 5, 1990, referred to in Ody (1992 pp.20-21).
40. "Township Firms Propel China's Economic Growth" *supra* note 34
41. Given the conflicting evidence, more research is needed. A nationwide survey of T.V.E. pollution levels was scheduled to take place in late 1996. This will update the previous studies mentioned in the text and provide data to the National Environmental Protection Agency to be used to

implement further pollution controls - see Liu Yinglang "Pollution by Township Firms to be Investigated" *China Daily* April 12, 1996 p.2.

42. This sort of depiction is common in the wider literature. For other descriptions of America and Europe as "individualistic societies" and East Asia as "communal societies" see Franke *et al* (1991) and Gray (1996).

ENDNOTES TO CHAPTER FIVE

1. To date the structural evolution of T.V.Es has proceeded in four main ways: (a) Forming of associations between T.V.Es. (b) Forming of associations between T.V.Es and S.O.Es or foreign trade companies. (c) Forming of associations between T.V.Es and foreign funded enterprises. (d) Forming of associations between T.V.Es and universities or research institutions - see Goodhart & Xu (1995) Li (1995) and Shen (1990) for elaboration. Wang & Lu (1990) and Naughton (1995) make similar points about the external contracts of rural enterprises: Wang & Lu (1990 p.128) write: "Rural Enterprises form joint ventures with firms in different areas. ... As a result blocks of rural enterprises are being created all over China. Many rural enterprises like to cooperate with larger enterprises in cities to gain access to both new markets and new technologies. The large firms from the cities also gain from the low cost of land and housing - as well as the low wages of many rural enterprises". Naughton (1995 p.155) states: "The growth of rural enterprises in peri-urban areas was facilitated by direct co-operation between urban state-run firms and rural factories, primarily in the form of sub-contracting. In the three province level municipalities of Beijing, Shanghai and Tianjin, [up to 1984] an estimated 60-80% of rural industrial output was produced by subcontracting with large urban firms. The proportions were only slightly lower in nearby provinces such as Jiangsu and Zhejiang. ... In 1985 in the southern

Jiangsu town of Wangshi every one of the 93 rural enterprises had some kind of subcontracting or joint-venture with an urban enterprise ... ”.

2. See Lin *et al* (1992 p.265), Gang (1993) and Naughton (1995 p153). Gang (at pp.53-54) writes: “It is common knowledge that in granting loans [the Agricultural Bank of China and Rural Credit Co-operatives] are heavily influenced by local government. Given the severe lack of formal institutions in China, local governments have proved indispensable to banking institutions at the local levels”. In 1993 *The Economist* (February 6 1993 p.60) reported that “in normal times branch banks listen much more to the demands of provincial and local officials than to instructions from authorities in Beijing. Last year the banks, all of which are state-owned, lent twice as much as the government originally authorised”.

- 3 Chang & Kwok (1990) provide another example of flexible labour allocation. They state (at p.146) that in the sunan region: “In areas with an annual cropping system of rice-rice-wheat, there are three periods of factory days off per year to release workers for work on their farms, each lasting about seven days. The first occurs in May, for harvesting winter wheat and transplanting the first rice crop. The second occurs toward the end of July, when the first crop of rice is harvested and the second crop of rice transplanted. The third covers the last few days of October and the first few days of November, when the second crop of rice is harvested and a winter crop of wheat or rapeseeds is planted. In the area where the crop system includes only one crop of rice, there are two periods of days off. During these periods, the entire factory is closed down and every worker is busy on his or her farm, including the manager of the factory”.

4. The notion of self enforcing implicit contracts is discussed, in the context of the broader literature on the firm, in Hart & Holmstrom (1987 pp.141-147). Most of these ideas draw on a broader general literature on contract

law and social norms. For a recent exposition of this literature see the special issue of *Cambridge Journal of Economics* (1997) vol. 21 (2).

5. I am not going to enter the debate here that has evolved out of Kreps (1990), as to what extent formal institutions depend on reputation effects. The argument I am making is that Kreps' explanation fits well with informal institutions observed in the T.V.E sector. This makes no judgment about the wider application of his argument. For further discussions of the wider issues see either Borland & Garvey (1994) or Milgrom & Roberts (1988).
6. As Boisot & Child (1996 p.48) put it: "These transactional arrangements ... appear to have considerable latent strengths. Thus the institutionalised use of negotiation between enterprises and local authorities appears to introduce flexibility into regional property rights and to allow for the reconstitution of transactions to meet new opportunities and changing circumstances". The strengths of these arrangements are reflected in the saying common amongst local people in the sunan region in southern Jiangsu: "small boats turn around quickly" - see Shen (1990 pp166-167).
7. A related development has been the emergence of a number of "clan networks" since the middle of the 1980s. For example, one survey, reported in Mao (1991), found that among 273 villages in Linhu County, Hunan Province, 230 villages had established clan organisations such as "clan committees" since 1988. Another survey, reported in Cheng (1990) found that in Yueyang District, Hunan Province, one-third of the villages had clan organisations. These clan networks often facilitate informal contracting in the T.V.E sector. For example Oi (1986) and X.Lin (1996) mention that clan networks have become an important element in getting a job in small-scale village enterprises. In other cases the influence of the clan network is so extensive that it rivals the T.V.G (see X.Lin 1996).

8. The full passage in Shih (1995 p.139) is "what separates China from Japan is that the tight relationship of rights and obligations between the workers and the factory is not combined with a sense of belonging and identity. This happens not only in some of the most successful factories, but also in those that suffer a low profit margin. ... This is the crux of the problem of China's workers' culture. Most have no vision and refuse to identify with their factory. The more fortunate are elevated by their superiors and may gradually develop a sense of future and belonging. Most workers, though, must be prodded by material reward".
9. For example Pei (1996 p.50) states: "A young director of a village enterprise said, in answer to my question of why there was no supervision: 'We have grown up together and I knew who worked hard and who didn't in my village before I chose workers from among them. Therefore I trust my workers and know they will not let me down'".
10. Also see the discussion of Nee's general approach to "market transition" in Lin (1995). Lin (1995) makes a detailed comparison between Nee's approach and Jean Oi's contrasting concept of "local corporatism".
11. This paragraph draws on a discussion of Popkin's (1988) paper in Lorenz (1992). Lorenz discusses Popkin in the context of industrial districts.
12. For example, the introduction of "villagers' committees" (*cunmin weiyuanhui*), in the 1982 constitution was designed to act as both a pivot between the T.V.G and peasants and to promote collective ownership and co-operation at the village level. Moreover, commensurate with the introduction of "villagers' committees" local party structures were strengthened. Both measures were designed to give the political centre a greater role at the village level - see Christiansen (1992 pp. 36-37). See also "China's Grassroots Democracy" *The Economist* (November 2 1996

pp.81-85). In that article it is reported (at p.85), that "while some cadres are prepared to suggest that democracy in the villages may lead to bigger things, it is not at all clear that this is what the architects of village democratisation had in mind. ... The party, says one senior cadre, hopes that village democracy 'can help safeguard central authority'".

13. I prefer to use the term "regional based economies" rather than the term "industrial districts". The reason is that the latter term conceivably carries notions of the "Third Italy" or other *particular* European or American regional variations like Route 128 or Silicon Valley. The phrase "regional based economies", is intended to be both more general and inclusive.
14. Gelb & Svejner (1990 p.422), nevertheless, note that: "Z-firms [*i.e.* the J-mode] often derive from strong identification between firms and communities". These authors point out that "many originated in small isolated towns and were started by owners with strong ethical principles".
15. See the two special issues of *Eastern European Economics* (1996) vol. 34 Nos. (1) and (2) entitled "Regional Problems and Small and Medium Enterprise Development in Transition Economies". See also the references cited in chapter eight endnote 4. These papers take a regionalist approach to post-socialist transformation in Eastern Europe.
16. This point is discussed further in chapter eight.

ENDNOTES TO CHAPTER SIX

1. The term "traditional T.V.E" is used in this chapter to represent the standard conception of the T.V.E as regional based with vaguely-defined

ownership rights. This distinguishes regional based T.V.E from larger often coastal and suburban T.V.Es which don't fit the traditional mould.

2. According to *China Daily* (25 September 1991 p.1) in 1980 there were just 48 rural enterprises capable of manufacturing products considered to be internationally marketable. However in 1991 there were almost 80,000 rural enterprises exporting overseas. The foreign exchange earned by the exports of rural enterprises in 1990 was \$US 13 billion which was one quarter of China's total export earnings. Exports by rural enterprises as a share of total exports increased from less than 13% in 1987 to 21% in 1990 and 30% in 1991 ("Learning the Rules of Foreign Trade *China News Analysis* no. 1464 p.7). The trend is continuing. Estimates suggest that rural enterprises now account for one-third or more of China's total exports. For some of the media reports documenting this phenomenon see "Beijing Rural Enterprises Move into the World Market" [Text] Beijing XINHUA September 1 1994 GMT *Foreign Broadcasting Information Service*; "Rural Enterprises in Zhejiang Expand Business Overseas" [Text] Beijing XINHUA August 12 1994 GMT *Foreign Broadcasting Information Service*, Chen Junsheng "Township Enterprises Develop an Export Oriented Economy" *Beijing Review* January 15-21 1996 pp.17-20 and "Chinese to Widen Investment Abroad" *China Daily* April 4 1996 p.5.

3. Articles on the J-mode are common in journals such as *Shehuixue Yanjiu* (Sociological Research), *Shenzhen Tequbao* (Shenzhen Special Economic Zone Papers) and *Shehui* (Society). For reviews of this literature in English see Lewis & Wanning (1994) and Chan (1995). The best known report discussing the pros and cons of the J-mode and broader Japanese management in the Chinese context is CESRRI (1988)

4. To some extent the T.V.G performs the same role as the main bank does in the J-mode case. The importance of the T.V.G to the T.V.E is discussed *inter alia* in Chang & Wang (1994) and Naughton (1994). The role of the T.V.G is similar to the main bank in the sense that the T.V.G is an important mechanism underpinning the efficacy of informal exchange. For example, as pointed out in the last chapter the T.V.G often acts as guarantor on loans which the T.V.E takes out. The stabilising role which the T.V.G performs depends on its prominence as a recognisable communal institution. However, more than this, the model, in the last chapter, suggested that the T.V.G's role extends to monitoring the evolution of collective norms in the absence of formal sanctions.
5. For example, a recent report suggests that moves to convert T.V.Es to joint stock firms in Jiangsu have been motivated by two main factors: (i) rising levels of debts and (ii) falling profits - see *Zhonghua Gongshang Shibao* (China Industry and Commerce Times) March 19 1997 p.4
6. This topic has recently received extensive coverage in the financial press - see eg "Japanese Finance" *Financial Times* Survey March 25 1997.
7. Song-Yi & Han Guojian "Rural Economy Records Progress" *Beijing Review* 21-27 February 1994 p.14.
8. *Jingji Ribao* (*Economic Daily*) January 17 1997 p.10
9. Li Linhuan "Township Enterprises Drive the Value of Export Up" *Intertrade* April-May 1993 p.16. See also Zhou Handa "The Position and Role of Township Enterprises in Foreign Trade" *Intertrade* July 1992 p.30.
10. Li Linhuan id:16-17.

11. The ownership arrangements in these enterprises is often more ambiguous than in T.V.Es. The parent group invests capital in these firms on an informal basis when the group has funds to spare, but there are no contracts governing the relationship between the investors and the enterprise. Thus, when the enterprise grows it is not clear whether the assets belong to the enterprise or parent group (see Zhai 1997 p.17).
12. Edward Cody "China's Mills Close a Chapter - Textile Workers Who Spun a Revolution Lose Jobs" *International Herald Tribune* January 6 1997 p.1
13. *Jingji Ribao* supra note 8
14. *Renmin Ribao (People's Daily)* February 17 1997 p.10
15. *Renmin Ribao* February 19 1997 p.2
16. *Renmin Ribao* supra note 14
17. ibid
18. *Xinhua* news agency, Beijing, in English 1115 GMT 18 July 1996 reproduced in *Summary of World Broadcasts, Part 3, Asia and the Pacific* 24 July 1996.
19. This is consistent with the often cited observation that piece rates are common in rural enterprises and that the work tends to be amenable to this form of remuneration (see eg Nolan 1993a p.304).

20. A dual structure will emerge with an increase in α irrespective of (i) the extent of institutional innovation (drawing parties into the core) and (ii) the extent of arms-length contracting in the extended sector. If we start from a position where $\alpha=0$, given $0<\alpha<1$, provided that an increase in the number of contracting parties results in some arms-length exchange in the extended sector α must become greater than zero. Once a dual structure exists the extent of the extended sector relative to the distinct group will depend on trade-offs between formal and informal exchange.

ENDNOTES TO CHAPTER SEVEN

1. Average losses which loss making firms incurred was also tried in some of the initial regressions. While the results are not reported, this proxy gave similar results to the number of loss making firms per 1000 firms.
2. The previous empirical work considering the relative importance of communal and personal characteristics on wage determination is conflicting. Gelb (1990) suggests that communal characteristics are more important, while Knight & Song (1993) suggest that personal characteristics are more important. Two points need to be borne in mind. First, neither of these studies use workers' share as the dependent variable. Second I am glossing over the fact that sometimes it is hard to know what personal characteristics are and what communal characteristics are. The two are sometimes merged in the extended clan structure of the township-village. To illustrate the point, if the township-village as a whole, sponsors an individual's education, is education a personal or communal characteristic? To this extent it is impossible to know the relative importance of personal and communal characteristics.

3. See, in general, papers presented at the conference "Socio-Economic Transformation and Women in China" held at SOAS June 8 1995.
4. Various diagnostic tests were performed on the Cochrane-Orcutt transformation to check for the existence of both multicollinearity and heteroscedasticity. The tests, however, suggested that neither was a problem. The tests and results are set out in table A1 (in the appendix).
5. Gregory & Meng (1995 footnote 18) note that education is an important screening device at university graduate level. In particular they mention a regulation that university graduates and above should be assigned to jobs as technical supervisors or management staff and that their wage level has to be higher than that of workers. However, this is likely to be of marginal importance in T.V.Es given the education level of most workers.
6. Further regressions were run on selected provinces (ie the provinces with the highest T.V.E output value) in an attempt to increase the magnitude of the adjusted co-efficient of determination, but the results were similar.
7. "China on the Move" *The Economist* July 6 1996 pp.72-73 at p.73
8. For example *The Economist* article *ibid* notes (at p.73) that schooling is provided free in the home village, but costs 1000 yuan a term elsewhere.
9. This is consistent with the results of a study of more than 10,000 workers employed in 100 enterprises (S.O.Es, T.V.Es and private firms) conducted by the Chinese Workers' Movement Institute in seven provinces - Guangdong, Shanghai, Zhejiang, Gansu, Heilongjiang, Yunnan and Hebei (see Feng & Xu 1993) The findings suggest that in the coastal

provinces, where there is a higher proportion of immigrant labour, workers are more market-oriented than workers in the interior provinces. For example, in the sample workers in the coastal provinces were more mobile and wages depended more on performance-related bonuses.

10. The results of the diagnostic tests are set out in table A2 in the appendix.
11. To test whether outliers were affecting the results I considered a plot of residuals against fitted values, but it was difficult to tell from the graph.
12. The results of the diagnostic tests are set out in table A3 in the appendix.
13. The results of the diagnostic tests are set out in table A4 in the appendix.

ENDNOTES TO CHAPTER EIGHT

1. These two factors (communal ties and socialist political heritage) have sometimes been intertwined - for example Maoist strategies attempted to cultivate socialist policies through fostering communal development.
2. There is also a fair bit of official support for the notion that China should promote diverse organisational forms. For example, see Du Runsheng's speeches which are collected in Gottschang (ed) (1995). Du Runsheng was a major spokesman on rural reform in the 1980s. To illustrate, in one speech - "Striving for Stable Growth of the Rural Economy" delivered at the Party Central Committee Conference on Rural Work, November 12 1986 (Gottschang ed 1995 chap.16) he made the following observation:

"There are ... forms of association developing every day that break out of the boundaries of the ownership system, such as joint-stock entities, combinations of industry and agriculture, combinations of production, supply and marketing, production combined with science and technology,

urban-rural enterprise groups and companies with mutual investment by enterprises with different forms of ownership. ... [Each] must be allowed to play their own roles and develop in their own ways. This approach is conducive to providing the masses with more opportunities for choices, ... it is also conducive to gradually forming a rural socialist system that is economically beneficial and moves towards common social prosperity through diversified development" (Gottschang ed 1995 pp.175-176).

3. See the special issue of *World Development* (1994) vol. 22 (4).
4. Most of the contrary evidence relates to Western Europe where, some attempts to adopt J-mode features have been less successful due to workers' resistance. For a critical view of the success of Japanese transplants in Europe see the special issue of *Asia Pacific Business Review* (1996) vol. 2(4). And for documentation of worker resistance to J-mode transplants in Britain see Wilkinson & Oliver (1988).
5. For general overviews of attempts to develop regional policies and/or foster small and medium enterprise development in post-socialist economies in Eastern Europe and the former Soviet Union see Bianchi (1992), Ernste & Meier (1992a) Murray (1992), Malle (1996), Paulenko (1995), Petrakos (1996), Semenov & Shutl'berg (1995) and Tykkylainen (1995). For examples of regional policies in specific countries see Joffe (1990), Neumann (1992, 1993) - Hungary; Huber (1995) - Poland; Anton *et al* (1996) - Romania; Balaz (1995), Benacek (1995), Myant (1995), Smith (1995, 1996, 1997) - Czech and/or Slovak Republics; Chekurov (1995), Leskin & Shvestsov (1995), Matsnev (1996), Mau & Stupin (1997) - Russia; and Grabher (1992, 1994) - the former G.D.R.
6. For full details see S.Miller and R.Rutherford "IFC's Small Enterprise Fund Reaches Out" *Transition* November-December 1996 pp.20-22.

7. For discussion about the potential role of the Higher Education Science Park Association (HESPA) in Russia see EBRD (1992). For elaboration on the National Agency for the Development of Small and Medium Enterprises (NADSME) and the Foundation for Regional Development (REGRO CSFR) in the Czech and Slovak Republics see Smith (1997) and Tomasek (1992) respectively. The role of the South-East Entrepreneur Centre (SEEC) in Estonia is discussed in Raagmaa (1995).
8. The PHARE programme (Poland/Hungary Assistance in Economic Reconstruction) was established in 1989, originally for Poland and Hungary, and later expanded to Albania, Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia. It has been the major source of multilateral foreign assistance from Western Europe.
9. Peter Nolan put forward a similar argument to this in an address entitled "Indigenous and International Big Business in China" at the 8th Annual Conference of the CEA (UK) held at L.S.E December 17 and 18 1996. These ideas are also articulated in Nolan (1993a pp.186-187, 1996).
10. "World Bank to Lend \$6 Billion to Russia" *The Wall Street Journal Europe* April 15 1997 p.2
11. This point is reinforced by the fact that while the evidence is mixed - see section 2.3 - recent research suggests that in China T.V.Es and large S.O.Es are now the best performers (see Nolan 1996, Lo 1997 chap. 4).
12. For an overview of regional based economies in Europe, Japan and the United States see Storper (1995). For an overview of industrial districts and regional based economies in developing countries see Schmitz (1990) and the special issue of *World Development* (1995) vol. 23 (1).

13. This paragraph draws heavily on Humphrey & Schmitz (1996 p.1861).
14. These and other examples are reviewed in Humphrey & Schmitz *ibid*.
15. There are a few other well known cases in the literature of schemes set up with institutions analogous to network brokers. An often cited example in Baden-Wurrtemberg is the Steinbeis Foundation. There are over 100 Steinbeis centres throughout the region which perform the dual role of advising small and medium enterprises and working strategically on technology transfers - see eg Schmitz & Musyck (1994). An example from a developing country is the *Proyectos de Fomento* (Development Projects) in Chile. The Chilean small and medium enterprise (S.M.E) promotion agency - SERCOTEC - set up schemes to foster networking between groups of S.M.Es and in some cases promote links between the network and large customers - see eg Humphrey & Schmitz (1996).
16. For other examples see Brusco (1992) and Brusco & Righi (1989).
17. "Divided Still: A Survey of Germany" *The Economist* November 9 1996

ENDNOTES TO CHAPTER NINE

1. As far as I know Li (1996) presents the only other mathematical treatment of the ambiguous relationship between T.V.Es and T.V.Gs. Although other articles looking at related issues like wage determination in T.V.Es present mathematical models - for example Dong & Putterman (1996).
2. For two recent exceptions, which explore the potential for new organisational forms in Eastern Europe see Frydman *et al* (eds) (1996) vol. 1 - in particular Stark 1996 - and Grebher & Stark (eds) (1996).

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