

Principal agent theory and private property rights in China's economic reform*

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ABSTRACT

As a contribution to the wider institutional analysis of China's enterprise reform, this paper analyzed three interrelated problems in the literature. It argued that principal-agent theory was not suitable for analysis of China's public enterprises, notably state-owned enterprises, as by definition, it requires a decision-making principal and clearly defined property rights. Actual problems of the theory's application included the enigmatic identity of the principals and the inability of deducing refutable hypotheses. One primary reason for the divergent views on the identity of principals was the widespread misconceptions on the private property rights. This misconception further led to divergent views on the nature of another important actor in China's economy, the township and village enterprises. It is hoped that clarification of these three concepts would facilitate further and better understanding of the transition economy in China.

KEYWORDS: state-owned enterprise, township and village enterprise, principal-agent theory, private property rights, China

INTRODUCTION

China's reform has achieved great success in the past 30 years. The Gross Domestic Product has been growing at roughly 10% every year. The economy has transformed from the former planned one to the current market economy. Although government intervention is still widespread, some industries in China have now been observing the most intensive competition in the world.

The miracle of China's success, in contrast with the relatively mediocre performance in the Eastern Europe, has attracted scholarly attention. In the early time, scholars observed forms rather than the essence. For instance, the reform in China was gradual rather than "big-bang"; agriculture reform preceded industrial reform, etc. Later, scholars investigated in more detail the institutional arrangements and proposed theories to explain China's success. For instance, the "local state corporatism" thesis¹ or "local governments as industrial firms" thesis² or "state entrepreneurialism" thesis³ where local governments constituted and coordinated the corporations, the "federalism" thesis⁴ or "semi-federalist government" thesis⁵ or "federalism, Chinese style" thesis⁶, as well as "privatization from below" thesis⁷ or "privatization, Chinese style" thesis⁸ or "insider privatization" thesis⁹.

Some scholars focused on the reform of the state-owned enterprise (SOEs). They measured the changes in the performance of the state-owned enterprises after different reform measures such as the increase in managerial autonomy¹⁰, performance contracts¹¹, modern enterprise system¹², privatization¹³, etc. The results were mixed¹⁴. Many theories

¹ Oi, Jean C., "Fiscal Reform and the Economic Foundations of Local State Corporatism in China", *World Politics* 45 (1992): 99-126. Oi, Jean C., "The Role of the Local State in China's Transitional Economy", *The China Quarterly* 144 (1995): 1132-1149.

² Walder, Andrew G., "Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy", *The American Journal of Sociology* 101 (1995): 263-301.

³ Duckett, Jane, "Bureaucrats in Business, Chinese-style: the Lessons of Market Reform and State Entrepreneurialism in the People's Republic of China", *World Development* 29 (2001): 23-37.

⁴ Qian, Yingyi, Weingast, Barry R., "Federalism as A Commitment to Preserving Market Incentives", *The Journal of Economic Perspectives* 11 (1997): 83-92.

⁵ Wang, Yijiang, Chang, Chun, "Economic Transition under a Semifederalist Government: The Experience of China", *China Economic Review* 9 (1998): 1-23.

⁶ Montinola, Gabriella, Qian, Yingyi, Weingast, Barry R., "Federalism, Chinese Style: The Political Basis for Economic Success", *World Politics* 48 (1996): 50-81.

⁷ Naughton, Barry, "Chinese Institutional Innovation and Privatization from Below", *American Economic Review* 84 (1994): 266-270.

⁸ Cao, Yuanzheng, Qian, Yingyi, Weingast, Barry R., "From Federalism, Chinese Style to Privatization, Chinese style", *Economics of Transition* 7 (1999): 103-131. Morris, Jonathan, Hassard, John, Sheehan, Jackie, "Privatization, Chinese-style: Economic Reform and the State-owned Enterprises", *Public Administration* 80 (2002): 359-373.

⁹ Li, Hongbin, Rozelle, Scott, "Privatizing Rural China: Insider Privatization, Innovative Contracts and the Performance of Township Enterprise", *The China Quarterly* 176 (2003): 981-1005.

¹⁰ Groves, Theodore, Hong, Yongmiao, McMillan, John, Naughton, Barry, "Autonomy and Incentives in Chinese State Enterprises", *The Quarterly Journal of Economics* 109 (1994): 183-209.

¹¹ Shirley, Mary, M., Xu, Lixin Colin, "Empirical Effects of Performance Contracts: Evidence from China", (paper presented in Corporate Governance of State-Owned Enterprises in China held in Beijing, 18-19 Jan. 2000 by Organization for Economic Co-operation and Development).

¹² Hassard, John, Sheehan, Jackie, Morris, Jonathan, "Enterprise Reform in Post-Deng China", *International Studies of Management & Organization* 29 (1999): 54-83.

or models were used to explain this. Examples were the multi-task theory¹⁵, competition¹⁶, policy burden¹⁷, and soft budget constraint¹⁸. However, the most popular approach was the principal-agent (PA) theory. Despite its popularity, this paper will demonstrate that PA theory is not suitable for analysis of China's public enterprise, because of the enigmatic identity of the principals and the inability of deducing refutable hypotheses.

A noticeable difference between China and other transition economies was the growth of the non-state sector, notably the township and village enterprises (TVEs), in the 1980s. It is generally agreed that growth of TVEs not only increased the volume of the economy but also increased competition which substantiated and induced further reforms. Scholars have been divergent on the nature of TVEs. Numerous theories or models were adopted or proposed to explain the success and the governance of TVEs. Examples included the "hybrid form" thesis¹⁹, i.e., a form that fall between market and hierarchy, the "vaguely defined cooperatives" thesis²⁰, the "ambiguous property right" thesis²¹, the "insecure property right" thesis²², as well as the "double-sided moral hazard" model²³. One primary reason for the divergent views on the identity of principals of the public economy and the nature of TVEs was the widespread misconceptions on the private property rights. The paper will show that the nature of TVEs is perfectly understandable if one has a correct

¹³ Dong, Xiao-yuan, Putterman, Louis, Unel, Bulent, "Privatization and Firm Performance: A Comparison between Rural and Urban Enterprises in China", *Journal of Comparative Economics* 34 (2006): 608-633. Jefferson, Gary H., Su, Jian, "Privatization and Restructuring in China: Evidence from Shareholding Ownership, 1995-2001", *Journal of Comparative Economics* 34 (2006): 146-166.

¹⁴ Jefferson, Gary H., Rawski, Thomas G., "Enterprises Reform in Chinese Industry", *The Journal of Economic Perspective* 8 (1994): 47-70. Li, Wei, "The Impact of Economic Reform on the Performance of Chinese State Enterprises, 1980-1989", *The Journal of Political Economy* 105 (1997): 1080-1106. Raiser, Martin, "Evaluating Chinese Industrial Reforms: SOEs between Output Growth and Profit Decline", *Asian Economic Journal* 11 (1997): 299-323. Jefferson, Gary, Hu, Albert G.Z., Guan, Xiaojing, Yu, Xiaoyun, "Ownership, Performance, and Innovation in China's Large- and Medium-size Industrial Enterprise Sector", *China Economic Review* 14 (2003): 89-113. Liu, Deqiang, Otsuka, Kejiro, "A Comparison of Management Incentives, Abilities, and Efficiency between SOEs and TVEs: The Case of the Iron and Steel Industry in China", *Economic Development and Cultural Change* 52 (2004): 759-780.

¹⁵ Bai, Chong-En, Li, David D., Tao, Zhigang, Wang, Yijiang, "A Multi-Task Theory of the State Enterprise Reform", (Working Paper No. 367, The University of Hong Kong, 2001).

¹⁶ Lin, Justin Yifu, Cai, Fang, Li, Zhou, "Competition, Policy Burdens and State-owned Enterprise Reform", *The American Economic Review* 88 (1998): 422-427.

¹⁷ Lin et al., "Competition, Policy Burdens and State-owned Enterprise Reform" (1998). Lin, Justin Yifu, Tan, Guofu, "Policy Burdens, Accountability, and the Soft Budget Constraint", *The American Economic Review* 89 (1999): 426-431. Gu, Edward X., "Beyond the Property Rights Approach: Welfare Policy and the Reform of State-owned Enterprises in China", *Development and Change* 32 (2001): 129-150.

¹⁸ Lin and Tan, "Policy Burdens, Accountability, and the Soft Budget Constraint" (1999).

¹⁹ Nee, Victor, "Organizational Dynamics of Market Transition: Hybrid Forms, Property Rights, and Mixed Economy in China", *Administrative Science Quarterly* 37 (1992): 1-27.

²⁰ Weitzman, Martin, Xu, Chenggang, "Chinese Township and Village Enterprises as Vaguely Defined Cooperatives", *Journal of Comparative Economics* 18 (1994): 121-145.

²¹ Li, David D., "A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector", *Journal of Comparative Economics* 23 (1996): 1-19.

²² Che, Jiahua, Qian, Yingyi, "Insecure Property Rights and Government Ownership of Firms", *The Quarterly Journal of Economics* 113 (1998a): 467-496.

²³ Hsiao, Cheng, Nugent, Jeffrey, Perrigne, Isabelle, Qiu, Jicheng, "Shares versus Residual Claimant Contracts: The Case of Chinese TVEs", *Journal of Comparative Economics* 26 (1998): 317-337.

concept of private property rights.

The main purpose of this paper is to demonstrate that misconceptions in private property rights could lead to misleading views on the understanding of the enterprise reform in China. Given that China's transition experience is arguably the most important one in the human history, a correct understanding of China's enterprise reform is vital to the understanding and development of institutional economics. It should be noted that I do not intend to review all the theories in relation to the economic transition in China. Rather the emphasis was placed on the mistakes which could possibly bewilder the future readers. Hence, three interrelated areas were examined in detail. They are the merits of principal-agent theory in explaining China's enterprise reform, the concept of private property rights and the nature of township and village enterprises (TVEs).

The rest of the paper will be arranged as follows. The next section will survey papers on China's enterprise reform using principal-agent theory. It is found that researchers had divergent views on who were the principals of public enterprises. The applicability of PA theory in China's enterprise reform will then be questioned. The third section will show the widespread misconceptions of private property rights. This has led to divergent views on the nature of TVEs which will be discussed in the fourth section. The last section concludes.

APPLICABILITY OF PA THEORY IN CHINA'S ENTERPRISE REFORM

It has been popular to approach the issues of corporate governance in China's SOEs and TVEs with principal-agent (PA) theory. PA theory has been widely used to analyze corporate governance in advanced capitalist economies. PA relationship happens when a principal entrusts an agent to perform a certain tasks. Here, there must be a subject, the principal, who shall be able to make decisions. Whether a state or a department could be the principal is doubtful, as both are merely concepts instead of decision-making persons. In addition, where the principal can entrust something to the agent, by definition the principal to some extent has property rights over that matter. However, it is well-known that the property rights were poorly defined at least in the early transition period of China's reform. Hence, there are *a priori* reasons to believe that PA theory is not suitable for analyzing China's enterprise reform, while there are indeed two major problems associated with the research works that make PA Theory not suitable for analyzing the issues of corporate governance of China's public enterprises. One problem is the enigmatic identity of the principals. The other lies in the merit of the theory in deriving refutable hypotheses.

Who are the principals?

In the studies of corporate governance in China's public enterprises, researchers differed in deciding who the principals were and who the agents were. Table 1 lists the PA relationships described by 17 works on China enterprises' corporate governance. Generally,

researchers believed that the government or the state was the principal²⁴. Indeed, Li and Wu²⁵ gave the generalized remark that “government *agencies* are *principals*” (p.2). This apparent contradiction is surprising, but it somehow reveals the difficulties in identifying the principals in the SOEs.

[Table 1 here]

Some researchers distinguished government from government officials. Perhaps they were aware of the fact that principals should be able to making decisions. For instance, Chen and Rozelle²⁶ and Shirley and Xu²⁷ thought that “government officials”, instead of “government” itself, were the principals. While Lin and Zhu²⁸ did not distinguish “government” from “the people”, claiming that “government (or the people)” was the first-tier principal, while “government bureaucrats” lied in the middle-tier who were both the agent to the first-tier principal and principal to the lower-tier agents. Likewise, Tylecote and Cai²⁹ and Zhou and Wang³⁰ thought that the “state” or “people” was the first-tier principal, but they distinguished the “state” from the “government”, arguing that the “government” was the first order agent who in turn was the principal to lower order agents. Hence, two-tiered or multi-tiered PA relationships were introduced.

Even more complicated PA relationships have been introduced as well. For instance, Zhang³¹ presented a “dual hierarchical PA chain” consisting of an upward PA relationship and a downward PA relationship. The former consisted of “residual claimants (co-owners) of the public economy” as principals and “central committee representing the whole community” as the agent; while the latter consisted of the central committee as the principal and “insider members of the firm” as the agent. Hence, the PA relationship of the public economy was “typically characterized by two ‘macro’ hierarchies”. The first hierarchy was formed via a delegation chain of power from the principals to the central

²⁴ Hsiao et al., “Shares versus Residual Claimant Contracts: The Case of Chinese TVEs” (1998). Lin et al., “Competition, Policy Burdens and State-owned Enterprise Reform” (1998). Mengistae, Taye, Xu, Lixin Colin, “Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises”, *Journal of Labor Economics* 22 (2004): 615-637. Xu, Lixin Colin, “Determinants of the Repartitioning of Property Rights between the Government and State Enterprises”, *Economic Development and Cultural Change* 46 (1998): 537-560.

²⁵ Li, David D., Wu, Changqi, “The Ownership School vs. the Management School of State Enterprise Reform: Evidence from China”, (William Davidson Working Paper No. 435, Hang Leung Center for Organization Research, Hong Kong University of Science and Technology, 2002).

²⁶ Chen, Hongyi, Rozelle, Scott, “Leaders, Managers, and the Organization of Township and Village Enterprises in China”, *Journal of Development Economics* 60 (1999): 529-557.

²⁷ Shirley and Xu, “Empirical Effects of Performance Contracts: Evidence from China” (2000).

²⁸ Lin, Yi-min, Zhu, Tian, “Ownership Reform and Corporate Governance: The Case of China's State-owned Enterprises”, (SJE International Conference on Corporate Governance and Restructuring in East Asia, 25 Aug. 2000, Seoul).

²⁹ Tylecote, Andrew, Cai, Jing, “China's SOE Reform and Technological Change: A Corporate Governance Perspective”, *Asian Business & Management* 3 (2004): 57-84.

³⁰ Zhou, Mi, Wang, Xiaoming, “Agency Cost and the Crisis of China's SOEs”, *China Economic Review* 11 (2000): 297-317.

³¹ Zhang, Weiyong, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works”, *China Economic Review* 8 (1997): 67-82.

committee. The second was formed via a delegation chain from the central committee to the insider members of the firms. Each player played two roles: he was the agent of the principal and the principal of the agent (p.234-235). The same author in one of his later paper³² introduced two other systems of PA relationship. The author claimed that before the reform, there were two principals, namely, “ordinary citizens” as the “original principal”, and the “central planners” as the “acting principals”; while “industrial bureau” served as both the agent to the acting principals and the principal to the lower tier agent which was the insider member of the firm. The author further described the situation after reform as one where there were two “legitimized principals”, namely, the government and the insider members of the firm, and one “double-faced agent”, namely, the industrial bureau. Unfortunately the introduction of such sophisticated systems of PA relationship did not help explain economic matters, as no refutable hypotheses could be deduced from these systems.

Instead of referring to either the government or the people, Cauley and Sandler³³ argued that although “an SOE represents a multilevel organization, for which principal-agent interactions exist between each pair of hierarchical levels”, the focal PA relationship should be between the manager as the principal and the workers as the agents.

Researchers sometimes changed their minds in different pieces of works. Examples were Zhang³⁴, which has been introduced above, and Shirley and Xu³⁵. Shirley and Xu³⁶ thought that “SOEs have no clear residual claimant” and “they are subject to many principals” (p.360). However, they thought that “government officials” are the principal in their later work³⁷.

The wide divergence in identifying who are the principals in the corporate governance of China’s enterprises raises the question of whether the principals exist at all. Chang³⁸ apparently noticed the problem of using the PA theory to explain corruption, pointing out that such a framework “presumed that the principal itself is not corrupt” (p.6). But why would the principal be corrupt? Applying the concepts of property rights, as encapsulated

³² Zhang, Weiyong. “A Principal-agent Theory of the Public Economy and Its Applications to China”, *Economics of Planning* 31 (1998): 231-251.

³³ Cauley, Jon, Sandler, Todd, “Agency Theory and the Chinese Enterprise under Reform”, *China Economic Review* 3 (1992): 39-56. Cauley, Jon, Sandler, Todd, “Agency Cost and the Crisis of China’s SOEs: A Comment and Further Observations”, *China Economic Review* 12 (2001): 293-297.

³⁴ Zhang, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works” (1997), “A Principal-agent Theory of the Public Economy and Its Applications to China” (1998).

³⁵ Shirley, Mary, M. and Lixin Colin Xu, “Information, Incentives, and Commitment: An Empirical Analysis of Contracts Between Government and State Enterprises”, *Journal of Law, Economics and Organization*, 14 (1998): 358-78. Shirley and Xu, “Empirical Effects of Performance Contracts: Evidence from China” (2000).

³⁶ Shirley and Xu, “Information, Incentives, and Commitment: An Empirical Analysis of Contracts Between Government and State Enterprises” (1998).

³⁷ Shirley and Xu, “Empirical Effects of Performance Contracts: Evidence from China” (2000).

³⁸ Chang, Tieh-chih, “Growth, Corruption and State Capacity? China in Comparative Perspective” (paper prepared for presentation to the Mini-APSA, Department of Political Science, Columbia University, 2004).

in Cheung's paper, "A Theory of Price Control"³⁹, the reason is either: (a) the principal is not the private property rights owner, or (b) the relevant property rights are not clearly defined. Indeed, Zhou⁴⁰ argued that there was no principal in SOEs (p.139). Hua et al.⁴¹ echoed this view and questioned that "who is really the 'state' and who represents it". They argued that "the principal is invisible" (p.407), since if all of China's citizens were considered as principals, it would be "too dispersed and powerless to exercise and control over SOEs" (p.408).

In contrast, the question who are the agents received less controversy. Most researchers believed that the managers of the SOEs are the agents⁴². Some others believed that employees of the enterprises are the agents⁴³.

The wide divergence between the researchers' opinions on the identity of the principals of public enterprises is the most persuasive evidence that principal-agent theory is not suitable for analyzing the issues of corporate governance in China's public enterprises. Further evidence lies in the fact that no refutable hypotheses have been derived from the theory. This will be examined in the next section.

The merit of PA theory in deriving refutable hypotheses

The merit of a theory lies in its capability of explaining or predicting human behaviours. In this regard, the principal-agent theory has been very poor in explaining China's enterprise reform. Few refutable hypotheses have been decently deduced from the theory. This could be revealed from a review of 15 works that studied SOEs using the principal-agent theory. Most of them, or 11 works⁴⁴, neither provided any refutable

³⁹ Cheung, Steven N.S., "A Theory of Price Control", *Journal of Law and Economics* 17 (1974): 53-71.

⁴⁰ Zhou, Qiren. *Property Right and Institutional Transformation – The Chinese Experiences* (Beijing: Social Science Works Press, 2002) [In Chinese].

⁴¹ Hua, Jinyang, Miesing, Paul, Li, Mingfang, "An Empirical Taxonomy of SOE Governance in Transitional China", *Journal of Management Governance* 10 (2006): 401-433.

⁴² Hsiao et al., "Shares versus Residual Claimant Contracts: The Case of Chinese TVEs" (1998). Lin et al., "Competition, Policy Burdens and State-owned Enterprise Reform" (1998). Lin and Zhu, "Ownership Reform and Corporate Governance: The Case of China's State-owned Enterprises" (2000). Mengistae and Xu, "Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises" (2004). Shirley and Xu, "Empirical Effects of Performance Contracts: Evidence from China" (2000). Tylecote and Cai, "China's SOE Reform and Technological Change: A Corporate Governance Perspective" (2004). Xu, "Determinants of the Repartitioning of Property Rights between the Government and State Enterprises" (1998).

⁴³ Cauley and Sandler, "Agency Theory and the Chinese Enterprise under Reform" (1992), "Agency Cost and the Crisis of China's SOEs: A Comment and Further Observations" (2001). Li and Wu, "The Ownership School vs. the Management School of State Enterprise Reform: Evidence from China" (2002).

⁴⁴ Bai, et al., "A Multi-Task Theory of the State Enterprise Reform" (2001). Cauley and Sandler, "Agency Theory and the Chinese Enterprise under Reform" (1992), "Agency Cost and the Crisis of China's SOEs: A Comment and Further Observations" (2001). Chang, "Growth, Corruption and State Capacity? China in Comparative Perspective" (2004). Huang, Yasheng, "Managing Chinese Bureaucrats: An Institutional Economics Perspective", *Political Studies* 50 (2002): 61-79. Lin et al., "Competition, Policy Burdens and State-owned Enterprise Reform" (1998). Lin and Zhu, "Ownership Reform and Corporate Governance: The Case of China's State-owned Enterprises" (2000). Tylecote and Cai, "China's SOE Reform and Technological Change: A Corporate Governance Perspective" (2004). Zhang, "Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works" (1997), "A Principal-agent Theory of the Public Economy and Its Applications to China" (1998), Zhou and Wang,

hypothesis nor tested one. This is certainly not to say that these works *themselves* are of little merits. It is the merit of the PA theory they used that is being challenged. Since these works did not clearly provide hypotheses, it is often difficult to prove whether there were any problems with the theory.

Nonetheless, some problems in their assumptions or definitions were found. For instance, Cauley and Sandler⁴⁵ assumed that

Principal's wealth = agent's total effort + exogenous risk

Where "principal's wealth may stand for profit or output", if "prices are normalized to equal one, then there is no difference between profit or output" (p.42). There are two mistakes here. Certainly effort is not the only factor affecting wealth or profit. If doing a business is equivalent to making efforts only, then one could seldom go bankrupt if he makes sufficient efforts. Secondly, output times prices makes revenue, *not* profit.

As a second example, Zhang⁴⁶ defined "degree of publicness" as the number of the original principals and "the size of the public economy" as the number of public-owned enterprises (p.231). These are clearly problematic. If we follow this principal, in case one shareholder sells all his shares to another shareholder, then the "publicness" of this company is reduced. Moreover, the author has assumed in the second definition that each and every enterprise is homogeneous.

By adding unrealistic assumptions or using arbitrary definitions, one may be able to deduce some propositions. However, this is of little value in explaining real world phenomena. For the present purpose of examining the merits of a theory, suffice it to say that a theory is of little use in terms of explaining human behaviour if it could not deduce refutable hypotheses. As to the PA theory, the question remained is whether the empirical works produced refutable hypotheses from the theory.

There were 4 empirical studies⁴⁷. However, none of them successfully proved the merit of PA theory in term of explaining human behaviours. The reasons could be that the results were mixed⁴⁸ or had refuted the theory⁴⁹, or the hypotheses were not decently derived from the perspective of PA theory⁵⁰. Mixed-results should invalidate the theory as the

"Agency Cost and the Crisis of China's SOEs" (2000).

⁴⁵ Cauley and Sandler, "Agency Theory and the Chinese Enterprise under Reform" (1992).

⁴⁶ Zhang, "Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works" (1997).

⁴⁷ Li and Wu, "The Ownership School vs. the Management School of State Enterprise Reform: Evidence from China" (2002). Mengistae and Xu, "Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises" (2004). Shirley and Xu, "Empirical Effects of Performance Contracts: Evidence from China" (2000). Xu, "Determinants of the Repartitioning of Property Rights between the Government and State Enterprises" (1998).

⁴⁸ Li and Wu, "The Ownership School vs. the Management School of State Enterprise Reform: Evidence from China" (2002).

⁴⁹ Shirley and Xu, "Empirical Effects of Performance Contracts: Evidence from China" (2000).

⁵⁰ Mengistae and Xu, "Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises" (2004). Xu, "Determinants of the Repartitioning of Property Rights between the Government and State Enterprises" (1998).

prediction of a theory must be certain to make the theory useful. These works will be examined in more detail as follows.

Li and Wu⁵¹ examined the relative effectiveness of the ownership school of reform measures and the management school of reform measures. The only hypothesis that was derived from the perspective of the principal-agent theory was that “sharing profit with the manager will increase efficiency”. The results were mixed, indicating that the PA theory may not be valid.

Shirley and Xu⁵² examined if and which of China's performance contracts improved productivity. There were two major problems that could easily invalidate the PA theory. One problem was that it was unclear how PA theory had led to the hypotheses. The other was that some of the findings actually refuted the PA theory. For instance, the authors asserted, without explanation, that bidding led to lower information asymmetry. Intuitively, bidding showed the commitment of the manager, which should mean that the shirking problem was less serious. However, the results showed that bidding did not increase productivity, thus refuting such a hypothesis. Secondly, performance bonding clearly showed a manager's commitment so that the shirking problem would be less serious. However, the results also showed that performance bonding did not increase productivity, thus refuting this hypothesis. The authors showed unwillingness to accept the results and attributed this to the weak enforcement of performance bonding, but produced no proof.

Mengistae and Xu⁵³ claimed that the PA theory was supported by merely showing that Chief Executive Officer (CEO) pay was correlated with enterprise performance. The problem was that the existence of some correlation was not a refutable hypothesis, but a phenomenon. We do not know for sure what conditions changed to lead to such a phenomenon. Likewise, Xu⁵⁴ claimed that PA theory was supported by merely testing whether the advice suggested from the perspective of the PA theory was actually followed. There was no test for whether or not the principal-agent theory was applicable.

The PA theory originated from Williamson school of thought in terms of “shirking” or “opportunistic behaviour”. The shirking problem is actually the metering problems of input productivity and rewards. People shirk because their productivities and / or rewards are difficult or costly to measure. The latter is one type of transaction cost. Theoretically the matter could be approached with either PA theory or transaction cost method. However, as it is difficult to measure shirking behaviour, it is hence difficult, if not impossible, to derive refutable hypotheses. Measurement of input productivities and rewards are difficult too.

⁵¹ Li and Wu, “The Ownership School vs. the Management School of State Enterprise Reform: Evidence from China” (2002).

⁵² Shirley and Xu, “Empirical Effects of Performance Contracts: Evidence from China” (2000).

⁵³ Mengistae and Xu, “Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises” (2004).

⁵⁴ Xu, “Determinants of the Repartitioning of Property Rights between the Government and State Enterprises” (1998).

However, it is possible in some cases to measure them. The use of piece-rate contract is certainly one example where input productivities can be measured and priced. Since I have not identified any work that successfully derive refutable hypotheses in my review, I hence doubt the merit of using PA theory to explain China's enterprise reform. Of course this review of 15 studies which focused on China's enterprise reform was by no means exhaustive. It nonetheless reflects the limited merit of PA theory in terms of deriving refutable hypotheses. However, whether this theory is applicable to corporate governance in advanced capitalist economies is out of the scope of this paper.

One reason why there were disagreements on the identities of the principals is that many researchers did not have a correct concept of private property rights to which we turn.

MISCONCEPTIONS OF PRIVATE PROPERTY RIGHTS

Definition of private property rights

It has been generally agreed that private property rights are a bundle of rights. Cheung⁵⁵ defined private property rights as three sets of exclusive rights that consists of (a) the exclusive right to use or decide how to use; (b) the exclusive right to receive income generated from the use of; and (c) the right to alienate the property. The right to alienate the property includes "both the right to enter into contracts with other individuals and to choose the form of such contracts". These three sets of rights are referred to as "use right", "income right" and "alienation right" respectively in the following text, although the former two are sometimes known as "control right" and "residual claim right" in the literature on firm or team production. For instance, Alchian and Demsetz⁵⁶ argued that ownership of the classical firm is "the bundle of rights: 1) to be a residual claimant; 2) to observe input behaviour; 3) to be the central party common to all contracts with inputs; 4) to alter the membership of the team; and 5) to sell these rights" (p.783). If one generalizes No. 2) and 4) sets of rights to "control right" and No. 3) to alienation right, then this bundle of right was consistent with the definition of Cheung⁵⁷.

The importance of clear delineation of private property rights towards market transaction has been clearly demonstrated by Ronald Coase in his investigation of the Federal Communications Commission⁵⁸. The idea that "delimitation of rights is an essential prelude to market transaction" (p.27) was later known as one version of the Coase Theorem, while the importance of market transaction in improving economic welfare has been established since Adam Smith. Given the importance of delineation of private property rights, which one out of the three sets of rights is the most important in

⁵⁵ Cheung, "A Theory of Price Control" (1974, p. 57).

⁵⁶ Alchian, Armen A., Demsetz, Harold, "Production, Information Costs, and Economic Organization", *The American Economic Review* 62 (1972): 777-95.

⁵⁷ Cheung, "A Theory of Price Control" (1974).

⁵⁸ Coase, Ronald, "The Federal Communications Commission", *Journal of Law and Economics* 2 (1959): 1-40.

delineating property rights? Zhou⁵⁹ (p. 233) argued that one of the merits of the Coase Theorem⁶⁰ was that it pointed out that whether the property rights were clearly delineated could be revealed during the alienation process. This was because alienation of a property inevitably involved some subjective estimation of the value of the property, while “subjective” meant there must be a subject (owner). Hence, alienation right is the most important one among the three in the study of the property rights issues in SOEs.

Surprisingly enough, many researchers have neglected the existence of alienation rights in their studies of China’s enterprise reform. Some authors have even omitted two sets of rights out of the three. Examples are Grossman and Hart⁶¹, Li et al.⁶² and Zhang⁶³. Some have “only” omitted one set of rights. Examples of omitting alienation right are Che and Qian⁶⁴, David D. Li⁶⁵, Perotti et al.⁶⁶, W. Li⁶⁷, Zhou and Wang⁶⁸. While the work of Furubotn and Pejovich⁶⁹ was one example of omitting income right. In contrast to omission of rights, some thought nominal ownership per se was also decisive in determining private property rights⁷⁰. Fortunately, at least there have been some correct definitions. Examples are Li et al.⁷¹, Naughton⁷², Putterman⁷³, Smyth⁷⁴ and Walder⁷⁵. One implication of wrong definition of private property right lies in divergent views on the principals of the public economy which we have examined. The other implication lies in the analysis of the nature of Township and Village Enterprises (TVEs). These omission or misconceptions will be examined in more detail before we turn to the nature of TVEs.

⁵⁹ Zhou, Qiren. *Income Is A Series of Events* (Hong Kong: Arcadia Press, 2003) [In Chinese].

⁶⁰ Coase, Ronald, “The Nature of the Firm”, *Economica* 4 (1937): 386-405. Coase, “The Federal Communications Commission” (1959). Coase, Ronald., “The Problem of Social Cost”, *Journal of Law and Economics* 4 (1960): 1-44.

⁶¹ Grossman, S., and Hart, O., “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration”, *The Journal of Political Economy* 94 (1986): 691-719.

⁶² Li, Shaomin, Li, Shuhe, Zhang, Weiyang, “The Road to Capitalism: Competition and Institutional Change in China”, *Journal of Comparative Economics* 28 (2000): 269-292.

⁶³ Zhang, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works” (1997).

⁶⁴ Che and Qian, “Insecure Property Rights and Government Ownership of Firms” (1998a).

⁶⁵ Li, “A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector” (1996).

⁶⁶ Perotti, Enrico C., Sun, Laixiang, Zou, Liang, “State-owned versus Township and Village Enterprises in China”, *Comparative Economic Studies* 41 (1999): 151-179.

⁶⁷ Li, “The Impact of Economic Reform on the Performance of Chinese State Enterprises, 1980-1989” (1997).

⁶⁸ Zhou and Wang, “Agency Cost and the Crisis of China's SOEs” (2000).

⁶⁹ Furubotn, Eirik G., Pejovich, Svetozar, “Property Rights and Economic Theory: A Survey of Recent Literature”, *Journal of Economic Literature* 10 (1972): 1137-1162.

⁷⁰ Weitzman and Xu, “Chinese Township and Village Enterprises as Vaguely Defined Cooperatives” (1994).

⁷¹ Li, Shaomin, Vertinsky, Ilan, Zhou, Dongsheng, “The Emergence of Private Ownership in China”, *Journal of Business Research* 57 (2004): 1145-1152.

⁷² Naughton, “Chinese Institutional Innovation and Privatization from Below” (1994).

⁷³ Putterman, Louis, “The Role of Ownership and Property Rights in China’s Economic Transition”, *The China Quarterly* 144 (1995): 1047-1064.

⁷⁴ Smyth, Russell, “Recent Developments in Rural Enterprise Reform in China”, *Asian Survey* 38 (1998): 784-800.

⁷⁵ Walder, “Local Governments as Industrial Firms: An Organizational Analysis of China’s Transitional Economy” (1995).

Examples of wrong definition of private property rights

Grossman and Hart⁷⁶ defined ownership of the firm by “control right” (p.693-694) which is only the first set of private property rights. This definition was followed by some researchers, although normally they would have added the income right. For instance, Chang and Wang⁷⁷ expressly claimed that they followed Grossman and Hart’s definition. However, they extended the definition of ownership by including both “residual control right” and “residual benefit right” (p.435).

Li et al.⁷⁸ defined ownership as “residual claimancy” (p.271). They claimed that “traditionally, ownership is defined by residual rights” and that “economists recognize that both residual claims and control rights are indispensable to ownership”. However, they omitted control rights “not because they are irrelevant but for technical tractability” and they conjectured that “their results apply to control rights as well” (p.271). Similarly, Zhang⁷⁹ defined ownership as “residual claimancy” (p.233). He again admitted that “economist have recognized that residual claim and control rights are two major components of ownership”, but he still omitted the control right “by assuming that the control right is a derivative of the residual claim” (p.233).

More researchers “merely” neglected alienation right. For instance, Che and Qian⁸⁰ defined the ownership of a project as “(i) the right of undertaking the task of control over the project type, and (ii) the right of receiving an unobservable part of the revenue” (p.473). This definition combines the notion of use right and income right. David D. Li⁸¹ thought control right (p.2) and decision right over the disposition of profit (p.6) were the only two aspects of private property rights. Perotti et al.⁸² agreed that private property rights were “a bundle of rights” but among which the most important were “the allocations of residual control rights and rights to residual benefits” (p.163). W. Li⁸³ did not make express definition. However, He implied that private property rights are “rights of control” and “residual claim”. Zhou and Wang⁸⁴ agreed that “the modern theory of property rights views ownership as a system of control rights and cash flow rights” (p.312).

In contrast to the omission of alienation right, Furubotn and Pejovich⁸⁵ opined that the

⁷⁶ Grossman and Hart, “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration” (1986).

⁷⁷ Chang, Chun, Wang, Yijiang, “The Nature of the Township-Village Enterprise”, *Journal of Comparative Economics* 19 (1994): 434-452.

⁷⁸ Li et al., “The Road to Capitalism: Competition and Institutional Change in China” (2000).

⁷⁹ Zhang, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works” (1997).

⁸⁰ Che and Qian, “Insecure Property Rights and Government Ownership of Firms” (1998a).

⁸¹ Li, “A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector” (1996).

⁸² Perotti et al., “State-owned versus Township and Village Enterprises in China” (1999).

⁸³ Li, “The Impact of Economic Reform on the Performance of Chinese State Enterprises, 1980-1989” (1997).

⁸⁴ Zhou and Wang, “Agency Cost and the Crisis of China's SOEs” (2000).

⁸⁵ Furubotn and Pejovich, “Property Rights and Economic Theory: A Survey of Recent Literature” (1972).

right of ownership in an asset consisted of “the right to use it, to change its form and substance, and to transfer all rights in the asset through, e.g. sale, or some rights through, e.g. rental” (p.1140). This concept included both use right and alienation right, with income right missing.

Ownership per se is not important to the private property rights. The Hong Kong land tenure system is a good example. All lands in Hong Kong belonged to the Crown before 1997 and to the Hong Kong government after 1997. However, the individual land “owners” still enjoy the use right, income right and alienation right, hence possessing the private property rights. If ownership per se is important, then this international famous example of capitalistic economy will have become “socialistic”. In our survey, there was one work that seemed to have thought ownership as one decisive factor for private property rights⁸⁶. The authors thought there were *four* basic tenets of property rights: ownership, residual claimant, alienation right, residual right of control.

Examples of correct definition of private property rights

Fortunately, there have been a few works which revealed a correct understanding of the private property rights. For instance, Putterman⁸⁷ indicated that the “core bundle of rights that comprise ‘ownership’ are the right to utilize the asset (utilization right), the right to possess the fruits (and responsibility for the negative outcomes, such as damages and debts), and the right to transfer these rights to another agent through gift or sale (alienation right)” (p.1049). Although Li et al.⁸⁸ cited the definition of ownership from Furubotn and Pejovich⁸⁹, they nevertheless added income right to the bundle, arguing that the three elements of ownership were “the right to sell an asset”, “the right to the returns generated from an asset”, and “the right to change the form or substance of an asset” (p.1146).

Other examples of correct definition of private property rights⁹⁰ will be reviewed in the analysis of the nature of TVE below. Researchers have had divergent views on the nature of the TVE. The key to understanding its nature is whether or not researchers had a correct concept of private property rights.

THE NATURE OF TVE

The nature of township and village enterprise (TVE) was one of the most controversial topics in the literature of economic transition in China. Numerous researches have intended to identify its nature. Examples were Chang and Wang⁹¹, Che and Qian⁹², Gordon and Li⁹³,

⁸⁶ Weitzman and Xu, “Chinese Township and Village Enterprises as Vaguely Defined Cooperatives” (1994).

⁸⁷ Putterman, “The Role of Ownership and Property Rights in China’s Economic Transition” (1995).

⁸⁸ Li et al., “The Emergence of Private Ownership in China” (2004).

⁸⁹ Furubotn and Pejovich, “Property Rights and Economic Theory: A Survey of Recent Literature” (1972).

⁹⁰ Naughton, “Chinese Institutional Innovation and Privatization from Below” (1994). Walder, “Local Governments as Industrial Firms: An Organizational Analysis of China’s Transitional Economy” (1995).

Smyth, “Recent Developments in Rural Enterprise Reform in China” (1998).

⁹¹ Chang and Wang, “The Nature of the Township-Village Enterprise” (1994).

⁹² Che and Qian, “Insecure Property Rights and Government Ownership of Firms” (1998a). Che, Jiahua,

Hsiao et al.⁹⁴, Jin and Qian⁹⁵, Li⁹⁶, Montinola et al.⁹⁷, Naughton⁹⁸, Nee⁹⁹, Oi¹⁰⁰, Perotti et al.¹⁰¹, Sun¹⁰², Walder¹⁰³, Weitzman and Xu¹⁰⁴, Zhang¹⁰⁵, Zhu¹⁰⁶. The following two sections concentrate on the relationship of the researchers' concept of private property rights and their ideas of the nature of TVEs. Table 2 shows a survey of 18 works that sought to discover the nature of TVEs. It is interesting to compare the authors' definition of private property rights and their opinions on the nature of TVEs. Generally, authors who had correct definition of private property rights would agree that township and village governments (TVGs) are the owners of the TVEs. However, authors who either had wrong concept or did not specify their understanding of private property rights had diverging views on the nature of TVEs. This will be detailed below.

[Table 2 here]

The nature of TVE with wrong or no definition of private property rights

There are 6 works on the nature of TVEs that had provided wrong definitions of private property rights¹⁰⁷. There were a range of opinions among these works. Some authors thought that TVEs were owned by local citizens but controlled by the local government¹⁰⁸.

Qian, Yingyi, "Institutional Environment, Community Government, and Corporate Governance: Understanding China's Township-Village Enterprises", *The Journal of Law, Economics & Organization* 14 (1998b): 1-23.

⁹³ Gordon, Roger H., Li, Wei, "Chinese Enterprise Behavior Under the Reforms", *The American Economic Review* 81 (1991): 202-206.

⁹⁴ Hsiao et al., "Shares versus Residual Claimant Contracts: The Case of Chinese TVEs" (1998).

⁹⁵ Jin, Heui, Qian, Yingyi, "Public versus Private Ownership of Firms: Evidence from Rural China", *The Quarterly Journal of Economics* 113 (1998): 773-808.

⁹⁶ Li, "A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector" (1996).

⁹⁷ Montinola et al., "Federalism, Chinese Style: The Political Basis for Economic Success" (1996).

⁹⁸ Naughton, "Chinese Institutional Innovation and Privatization from Below" (1994).

⁹⁹ Nee, "Organizational Dynamics of Market Transition: Hybrid Forms, Property Rights, and Mixed Economy in China" (1992).

¹⁰⁰ Oi, "The Role of the Local State in China's Transitional Economy" (1995).

¹⁰¹ Perotti et al., "State-owned versus Township and Village Enterprises in China" (1999).

¹⁰² Sun, Laixiang, "Anticipatory Ownership Reform Driven by Competition: China's Township-village and Private Enterprises", *Comparative Economic Studies* 42 (2000): 49-75.

¹⁰³ Walder, "Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy" (1995).

¹⁰⁴ Weitzman and Xu, "Chinese Township and Village Enterprises as Vaguely Defined Cooperatives" (1994).

¹⁰⁵ Zhang, "Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works" (1997).

¹⁰⁶ Zhu, Tian, "A Theory of Contract and Ownership Choice in Public Enterprises under Reformed Socialism: the Case of China's TVEs", *China Economic Review* 9 (1998): 59-71.

¹⁰⁷ Chang and Wang, "The Nature of the Township-Village Enterprise" (1994). Che and Qian, "Insecure Property Rights and Government Ownership of Firms" (1998a). Li, "A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector" (1996). Perotti et al., "State-owned versus Township and Village Enterprises in China" (1999). Weitzman and Xu, "Chinese Township and Village Enterprises as Vaguely Defined Cooperatives" (1994). Zhang, "Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works" (1997).

¹⁰⁸ Chang and Wang, "The Nature of the Township-Village Enterprise" (1994). Perotti et al., "State-owned versus Township and Village Enterprises in China" (1999).

Still some thought that TVEs were owned by local governments¹⁰⁹. Others insisted that TVEs had ambiguous or vaguely defined property rights¹¹⁰.

There are 9 works that studied the nature of TVEs but did not provide a definition of property rights. Three works thought that TVEs are owned by community members and controlled by the TVGs¹¹¹. Another 3 works thought TVGs owned the TVEs¹¹². One work simply summarized theories of TVEs but did not provide its own understanding¹¹³. Another work thought that TVEs could be characterized as hybrid forms¹¹⁴. The remaining one work¹¹⁵ was notable in that it emphasized that the property right structure of TVEs should not be regarded as static. Rather, TVEs have evolved from de facto TVG ownership in the past to the present diversified forms. The most notable form was joint stock cooperatives.

The nature of TVE with correct definition of private property rights

Researchers who had a correct understanding of private property rights would find that the ownership of TVEs was held by the TVGs. There are three such works in our survey. Naughton¹¹⁶ opined that township and village officials in their official capacity owned the TVEs because they possessed all the “key components of property rights: control of residual income, the right to dispose of assets, and the right to appoint and dismiss managers and assume direct control in necessary” (p.267). Similarly, Walder¹¹⁷ opined that the Township and Village Government (TVG) held the property rights of TVEs as they held “all rights to control, income flows, and sale or liquidation” (p.270). A further example is Smyth¹¹⁸ who also agreed that TVG exercised the property rights in the TVE as it possessed “the privileges of ownership, i.e., the right to transfer, use, or appropriate the assets” (p.788).

The nature of TVE interpreted

¹⁰⁹ Che and Qian, “Insecure Property Rights and Government Ownership of Firms” (1998a).

¹¹⁰ Li, “A Theory of Ambiguous Property Rights in Transition Economies: The Case of the Chinese Non-State Sector” (1996). Weitzman and Xu, “Chinese Township and Village Enterprises as Vaguely Defined Cooperatives” (1994). Zhang, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works” (1997).

¹¹¹ Che and Qian, “Institutional Environment, Community Government, and Corporate Governance: Understanding China’s Township-Village Enterprises” (1998b). Montinola et al., “Federalism, Chinese Style: The Political Basis for Economic Success” (1996). Zhu, “A Theory of Contract and Ownership Choice in Public Enterprises under Reformed Socialism: the Case of China’s TVEs” (1998).

¹¹² Gordon and Li, “Chinese Enterprise Behavior Under the Reforms” (1991). Hsiao et al., “Shares versus Residual Claimant Contracts: The Case of Chinese TVEs” (1998). Oi, “The Role of the Local State in China’s Transitional Economy” (1995).

¹¹³ Jin and Qian, “Public versus Private Ownership of Firms: Evidence from Rural China” (1998).

¹¹⁴ Nee, “Organizational Dynamics of Market Transition: Hybrid Forms, Property Rights, and Mixed Economy in China” (1992).

¹¹⁵ Sun, “Anticipatory Ownership Reform Driven by Competition: China’s Township-village and Private Enterprises” (2000).

¹¹⁶ Naughton, “Chinese Institutional Innovation and Privatization from Below” (1994).

¹¹⁷ Walder, “Local Governments as Industrial Firms: An Organizational Analysis of China’s Transitional Economy” (1995).

¹¹⁸ Smyth, “Recent Developments in Rural Enterprise Reform in China” (1998).

Those who regarded community members as the “owners” of TVEs sometimes neglect the matter of voluntary. Chang and Wang¹¹⁹, with wrong definition of private property right as reviewed above, sought to provide a rationale for the reason why the control right is given to the TVGs. They argued that the control right was given to TVGs because “ordinary citizens could not provide security and access to resources” (p.434). Although they correctly identified TVGs as the owner of the TVEs, they erred in that they assumed that the citizens *voluntarily* submitted their property rights to the government. Zhang¹²⁰ made similar mistakes in determining who the principals were in the public economy. As detailed in the previous section and Table 1, Zhang thought that the “community members” or “ordinary citizens” were the principals who delegated their power to the “central committee” or the “central planner”. The mistakes were obvious. The “community members” or “ordinary citizens” did not do so *voluntarily*, and they did not have the option to escape such an arrangement.

Two points could be deduced from the above analysis. The first is that we do not know the nature of a TVE unless we know who has the control right, residual claim right and alienation right of it. The second is that ownership structure of TVEs was not static but evolving. From late 1970s to mid-1990s, *most* TVEs were owned by TVGs, although some TVEs were “fake collectives” - only using collective label for protection and economic benefit¹²¹. These were correctly observed by those authors who had a correct understanding of private property rights. As institutional arrangements changed, when the political climate was no longer unfavorable to private ownership, and when the government no longer had comparative advantage over individuals on the procurement of resources, more TVEs had evolved into private ownership.

I have no intention to make a conclusion on how TVEs have evolved recently. The purpose of this section is to demonstrate that a wrong concept of private property rights could hinder one’s understanding of the economic nature of TVEs.

CONCLUSION

The great reform in China has been unique in human history. It successfully transformed a planned economy into a market one in less than 30 years, accompanied with a marvelous increase in economic performance. The experience in China would be most valuable for the understanding and development of institutional economics. However, misuse or misconception of theories could hinder one’s understanding of enterprise governance and reform in China. On the one hand, inappropriate theories were used to approach some issues. On the other hand, numerous new theories or terms were developed to explain those

¹¹⁹ Chang and Wang, “The Nature of the Township-Village Enterprise” (1994).

¹²⁰ Zhang, “Decision Rights, Residual Claim and Performance: A Theory of How the Chinese State Enterprise Reform Works” (1997), “A Principal-agent Theory of the Public Economy and Its Applications to China” (1998).

¹²¹ Oi, “The Role of the Local State in China’s Transitional Economy” (1995).

concepts perfectly understandable if one has a correct concept of private property rights. This paper has proposed that principal-agent theory is not suitable for analyzing state-owned enterprises as by definition the principals must be able to make decisions and own the property rights. It further demonstrated that the application of the theory had been problematic because of the enigmatic identify of the principals and the inability of deducing refutable hypotheses. Whether this theory is applicable to advanced capitalist economies is beyond the scope of this paper. One primary reason for the divergent views on the identity of principal was the widespread misconceptions on the private property rights. This misconception further led to divergent views on the nature of another important actor in China's economy, the township and village enterprises. Since state-owned enterprises and township and village enterprises were the only two significant forms of enterprises in the early stage of China's reform, the coverage of this paper is hence comprehensive. It is hoped that clarification of these three concepts would facilitate further and better understanding of the transition economy in China.

Table 1: Who are the principals and who are the agents?

Ref.	Author (Year)	Enterprise Type	Principal and Agent Relationship
1.	Cauley and Sandler (1992)	SOE	<i>Principal:</i> SOE manager; <i>Agents:</i> workers In addition, an SOE represents a multilevel organization, for which principal-agent interactions exist between each pair of hierarchical levels.
2.	Cauley and Sandler (2001)	SOE	<i>Principal:</i> manager; <i>Agents:</i> workers There are other pairs but this one should be the focal PA relationship
3.	Chen and Rozelle (1999)	TVE	<i>Principal:</i> Officials in the community; <i>Agent:</i> Not specified
4.	Hsiao et al. (1998)	TVE	<i>Principal:</i> local government; <i>Agent:</i> the TVE, especially its manager
5.	Hua et al. (2006)	SOE	The principal is invisible (p.407)
6.	Li and Wu (2002)	SOE	<i>Principal:</i> government agencies; <i>Agent:</i> SOE employees
7.	Lin et al. (1998)	SOE	<u>Not specified clearly but could be implied from the text:</u> <i>Principal:</i> the state; <i>Agent:</i> manager
8.	Lin and Zhu (2000)	SOE	<u>Two-tiered PA relationship:</u> <i>Principal:</i> government (or the people); <i>First tier agent and principal to the second tier agent:</i> government bureaucrats; <i>Second tier agent:</i> enterprises managers
9.	Mengistae and Xu (2004)	SOE	<u>Not specified clearly but could be implied from the text:</u> <i>Principal:</i> local government that typically owns the SOEs; <i>Agent:</i> CEO of SOE
10.	Shirley and Xu (1998)	SOE	SOEs have no clear residual claimant, they are subject to many principals (p.360)
11.	Shirley and Xu (2000)	SOE	<i>Principal:</i> government officials; <i>Agent:</i> SOE manager.

Ref.	Author (Year)	Enterprise Type	Principal and Agent Relationship
12.	Tylecote and Cai (2004)	SOE	<u>Two-tiered PA relationship:</u> <i>Principal:</i> the state or people; <i>First order agent:</i> the government; <i>Second-order agent:</i> top-management
13.	Xu (1998)	SOE	<i>Principal:</i> government; <i>Agent:</i> managers
14.	Zhang (1997)	SOE & TVE	<u>Dual hierarchical PA chain:</u> <u>Upward PA relationship:</u> <i>Principals (owner):</i> residual claimants (co-owners) of the public economy (community members); <i>Agent:</i> Central committee representing the whole community; <u>Downward PA relationship:</u> <i>Principal:</i> Central committee; <i>Agent:</i> Insider member of the firm
15.	Zhang (1998)	SOE	<u>Before Reform:</u> 1. <i>Original Principal:</i> ordinary citizens; 2. <i>Acting Principal:</i> central planners; 3. <i>Agent to 2 and Principal to 4:</i> industrial bureau; 4. <i>Agent to 3:</i> insider member of the firm. <u>After Reform:</u> <i>Two Legitimized principals:</i> The government and the insider member of the firm; <i>Double-faced agent:</i> industrial bureau.
16.	Zhou (2002)	SOE	There is no principal (p.139)
17.	Zhou and Wang (2000)	SOE	<i>Principal:</i> the state, or more accurately, every Chinese Citizen; <i>Agents:</i> by order the central government, provincial government, the local officials, the managers and workers.

Table 2: Concept of private property rights and the nature of TVE

Ref.	Author (Year)	Ownership Definition				Nature of TVE
		Use right	Income right	Alienation right	Nominal ownership	
1.	Chang and Wang (1994)	Yes	Yes	No	No	A TVE is owned by local citizens and controlled by TVG. Control right was assigned to the TVG because ordinary citizens cannot provide security and access to resources.
2.	Che and Qian (1998a)	Yes	Yes	No	No	Proposed a model of ownership under insecure property rights. TVEs are owned by local governments because they can limit state predation.
3.	Che and Qian (1998b)	N/A	N/A	N/A	N/A	TVEs are characterized as community enterprises which is the bottom tier of a three-tier structure, in which the middle tier is the community government and the top tier consists of the residents. The community residents are the beneficiaries of TVEs.
4.	Gordon and Li (1991)	N/A	N/A	N/A	N/A	Local governments effectively owned and controlled TVEs
5.	Hsiao et al. (1998)	N/A	N/A	N/A	N/A	Local government in practice owned TVEs
6.	Jin and Qian (1998)	N/A	N/A	N/A	N/A	Summarized 5 theories of TVEs but did not provide their own theory.
7.	Li (1996)	Yes	Yes	No	No	TVEs have ambiguous property rights. They are jointly controlled by entrepreneurs and the local governments.
8.	Montinola et al. (1996)	N/A	N/A	N/A	N/A	TVEs are owned by township and village communities and controlled by TVG.
9.	Naughton (1994)	Yes	Yes	Yes	No	Township and village officials in their official capacity owned the TVEs.

Ref.	Author (Year)	Ownership Definition				Nature of TVE
		Use right	Income right	Alienation right	Nominal ownership	
10.	Oi (1995)	N/A	N/A	N/A	N/A	TVEs are owned by TVG (local state corporatism); Some TVEs are "fake collectives"- only using collective label for protection and economic benefit.
11.	Perotti et al. (1999)	Yes	Yes	No.	No	Community members, as owners, possess the right to derive both short-run and long-run residual benefits from the TVE's operation, residual control rights rest in TVG. The community as a collective equity holder and the TVG as the executive equity holder.
12.	Smyth (1998)	Yes	Yes	Yes	No	TVG has de facto ownership rights of TVEs.
13.	Sun (2000)	N/A	N/A	N/A	N/A	The property right structure of TVEs should not be regarded as static. TVEs have evolved from de facto TVG ownership to the present diversified forms. Competition has induced such ownership reforms.
14.	Victor (1992)	N/A	N/A	N/A	N/A	TVEs are characterized as hybrid forms. They are neither public (state-owned) nor private, in theory their properties belong to all who live within the jurisdiction of the local governments.
15.	Walder (1995)	Yes	Yes	Yes	No	TVE is not a hybrid of state and private ownership; they are under a form of public ownership no different from the large urban state sector.
16.	Weitzman and Xu (1994)	Yes	Yes	Yes	Yes	TVE is a vaguely defined producer cooperative. The community government is the de facto executive owner of the TVEs. There are no residual claimants. Neither the government nor the residents have the alienation right. The government has no residual control right as well.
17.	Zhang (1997)	No*	Yes	No	No	TVEs are "public owned" and their property rights are also "vaguely-defined".

Ref.	Author (Year)	Ownership Definition				Nature of TVE
		Use right	Income right	Alienation right	Nominal ownership	
18.	Zhu (1998)	N/A	N/A	N/A	N/A	A TVE is in principle owned by all the residents in a township or village but controlled by the TVG, or more precisely, the TVG officials.

* The author omitted control right because it is “a derivative of the residual claim”.