To this reviewer, Part I, Edwin Mansfield's paper, in particular, and part IV, the industry papers are the guts of the book. The cases reported did provide some micro information to expand on the more widely known macro aspects of the intellectual property discussion. Generally, the other chapters suffer from an apparent attempt to reflect the views of the governments or the organizations with whom the authors are associated rather than an analysis of the topic by a detached observer. This is not uniformly true since Timothy J. Richards' chapter on reconciling divergent views on intellectual property rights among countries summarizes his research published in an interesting volume entitled *Intellectual Property Rights: Global Consensus, Global Conflict?*

I believe the editors could have helped to overcome some of the shortcomings of this volume by providing an introduction to the issues addressed in the book. Secondly, they should have written a chapter at the end, drawing together some of the points made in these diverse papers to demonstrate what the volume is contributing to the literature on intellectual property rights and capital formation. It never hurts to reemphasize what may be the obvious. Finally, this volume will be competing with a number of newer books which address some of the same issues but in greater depth, particularly in the international context.

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David Granick, *Chinese State Enterprises: A Regional Property Rights Analysis*, Chicago and London: The University of Chicago Press, 1990, ISBN 0-226-30588-0.

David Granick argues that China is unique among centrally planned socialist economies. Granick was consultant to the World Bank during 1982 to 1985 on a project in which the Chinese Academy of Social Sciences and the World Bank studied nineteen large and medium sized (2000 or more employees each) state owned industrial enterprises as well as a county administration in charge of a number of individual enterprises. Granick employs this study as the basis of his analysis. He maintains that China differs from other centrally planned economies because of the multiple-level supervision that exists over each individual enterprise; the frequent over-fulfillment of production plans; the widespread availability of allocated inputs and outputs outside the state administered system; the existence of multiple prices for the same product in a single region; the nature of Communist bureaucratic control over appointments to enterprises; and the form of labour allocation and wage determination used. Most of these features are attributed to the peculiar nature of property rights in an enterprise, in that many levels of government simultaneously hold and exercise these rights. This situation is encapsulated in the phrase "too many mothers-in-law".

Granick employs a principal-agent framework to explain these unique characteristics. The Chinese state enterprises are the agents with multiple principals exercising control over them. Several principals hold property rights in the same enterprise. Granick defines these property rights in terms of the principal's authority to appoint managers, set output and profit targets, and allocate output. Such property rights were originally acquired through investment in the fixed capital of the enterprise although, in some cases, tradition may also have played a role. The author attempts to explain several special characteristics of Chinese state enterprises in terms of the exercise of differentiated property rights by the multiple principals.

This thesis is illustrated by reference to the pattern of planning in China. Chinese national planning does not play the major coordinating role in the economy that it did in the former Soviet Union. A much smaller proportion of intermediate products is centrally allocated and only a share of the output of Chinese enterprises is designated for distribution to other entities. As a result only a fraction of output is supported by the allocation of materials. Thus, this portion of enterprise plans tends to be over-fulfilled.

Granick demonstrates that if the same administrative body that sets physical output targets also determines value and profit plans, over-fulfillment is likely to be much more frequent than if rival bodies set those plans. An enterprise under complete central (Beijing) or provincial control finds the controlling body exercising its property rights by allocating the entire output. The central authority then supports that choice by providing the bulk of required materials. Thus, there is much greater variation in the fulfillment of plans for physical output for enterprises where the body exercising property rights provides only some of the inputs and allocates only part of the output.

China also differs from other centrally planned economies in the existence of multiple prices and the virtual absence of widespread material shortages. The multiple prices existed before 1979 for different categories of suppliers (communes could charge higher prices than could state enterprises) and after 1979 on the basis of planned and above-plan outputs. The absence of material shortages is due to the extensive barter that takes place among and between enterprises. Granick finds little evidence for Janos Kornai's 'soft' budget constraint in Chinese state enterprises, arguing that regional governments imposed 'hard' financial and resource constraints upon the enterprises under their supervision. Thus, unlike most enterprises in other socialist countries, the possible violation of the budget does appear to constrain and influence the actions of Chinese state enterprises.

Granick's sample suggests that the compensation of managers and workers is entirely divorced from their achievements in terms of the usual success indicators such as profitability ratios and degree of plan fulfillment. In addition, top managers do not appear to be motivated by personal bonuses or the possibility of career advancement. This leaves unsettled the reason for the Chinese managers' responsiveness to market conditions and their strong record at improving both capital and labor productivity during the reform years for which sample data are available (1979—1982).

Another distinctive characteristic of the Chinese system is the high ratio of cash flow (profits plus sales tax and amortization) to output due to government reliance on industrial profits and sales tax for the bulk of its revenues. Also, due to the vigorous market for intermediate products, Chinese enterprises tend to be relatively efficient in their use of raw materials and fuel (which they have to purchase or barter) and relatively inefficient in their use of labor, which is abundantly available at low wages and cannot easily be fired, retired, or otherwise discharged.

In support of the property rights hypothesis, the right to appoint the supervisory authority within the enterprise was in most cases held by the Communist party committee of the principal organization exercising property rights over the enterprise. Until 1987 the authority within the Chinese enterprise tended to reside with the Party secretary and not the enterprise director; the opposite situation existed in the former Soviet Union. In China a single Party organization was responsible for the appointment of both the director and the Party secretary for that enterprise. Such a situation would have been rare in the Soviet Union. In China, all appointment and supervisory authority as well as property rights over the allocation of output of the enterprises examined were in the same hands and, thus, the usual efficiency losses due to split authority were eliminated.

Granick identifies a final unique characteristic of the Chinese economy, a uniqueness he attributes to China's status as a developing country. Chinese labor markets are distinguished by unusually low turnover rates, job inheritance and preference in hiring usually granted to family members, and a multi-tier system of non-private job opportunities. The existence of this system is an attempt at job creation by enterprises and local governments and significantly limits the ability of the central government to restrain the growth of urban purchasing power. Creating jobs is relatively costless because of the small proportion of wages in the total value of output produced and is, thus, the preferred means employed by enterprises and local governments to satisfy local constituents.

In the concluding portion of the book Granick highlights certain continuities and discontinuities between the pre-reform (1975—1978) and the reform (1979—1982) years for which data are available. First among the changes is the increasing significance of financial performance. Whereas regional principals had been interested in the production of goods for distribution within their own territories, they have since shifted their attention to goods with high profit margins and sales tax rates. Second, a sizable amount of urban job creation occurred at the hands of enterprises and regional governments whereas prior to 1979 the national government was much more involved in job creation.

Two major differences were especially striking within the sample. There was a substantial increase in plan over-fulfillment, indicating the declining importance of planning. Further, there was an increase in the variability of relative average earnings among the sample enterprises, reflecting the growing importance of monetary incentives for both production and general economic performance.

Among the continuities Granick observed were the bias toward regional autarchy, the limited coordinating role of planning, and the apparent absence of incentives linking rewards to indicators of performance. A final section speculates about the effects of the post reform characteristics detailed above on both the static and the dynamic efficiencies of the Chinese economy.

Overall, this is an interesting survey of the characteristics of the Chinese state enterprises that were observed in the World Bank sample. Unfortunately, not all the chapters in the book which describe these unique Chinese characteristics are directly linked to the property rights hypothesis. The two separate themes (unique characteristics and property rights) do not always mix well. This text should be of use to readers interested in comparative economic systems or perhaps those investigating applications of the principal-agent model. It is, however, of limited importance for the analysis of small business enterprises because only two of the enterprises included in this study may be considered 'small' (400—700 employees) even by the standards of Chinese state enterprises.

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