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State-Owned Multinationals

Governments in Global Business

Alvaro Cuervo-Cazurra

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To Alvaro Cuervo, for all his guidance

Foreword

State-owned enterprises (SOEs) proliferated after the Second World War, and by the 1970s were significant actors in many developed economies (excluding the United States) and most developing ones. Governments in China, the Soviet Union, and elsewhere had imposed state ownership as part of their communist ideology. In market economies, state ownership predominated in utilities and natural resources, such as oil, but there were also SOEs in some surprising sectors, such as movie theaters, trucking firms, paper plants, or tobacco companies. Governments resorted to state ownership for many reasons: to try to stimulate and direct the economy, to prop up or take over failing private firms, and, in emerging markets, to nationalize foreign-owned companies, especially formerly colonially-owned companies.

This rising wave of state ownership in market economies crashed in the 1980s when SOEs began to flounder in red ink. State ownership frequently proved hazardous to enterprise efficiency, especially when governments intervened to prevent layoffs, stimulate hiring, capture rents, prop up failures, protect against competition, or reward cronies. These multiple objectives, combined with soft budgets, monopoly powers, and politically driven hiring undermined SOE performance, especially in countries with weak governance institutions. Owner governments, frustrated with serial bailouts and futile reform efforts, began to liquidate the worst performers, privatize others, and cut firms off from government subsidies and protection. Privatization further accelerated when formerly communist countries began to transition to market economies. Today many of the early SOEs are privatized, defunct, or much shrunken, but state ownership is not a dead issue. While SOEs have faded, state-owned multinational enterprises (SOMNCs) have proliferated and become giants in ways not envisioned by scholars (such as myself) who studied SOEs. According to Musacchio and Lazzarini in this volume, 27 of the world's 100 largest firms by revenue in 2016 were SOMNCs, 16 of them owned by the Chinese government.

The papers in this volume suggest that SOMNCs are different from SOEs, and not just because they operate internationally and are typically much larger. SOMNCs often have private shareholders; sometimes the government is not even the majority shareholder. Because they operate in world markets, SOMNCs are

more likely to be exposed to competition. And because they have private shareholders and may be publicly traded, SOMNCs are subject to more independent monitoring by outside auditors, tax authorities, and the like. Governments' objectives for SOMNCs are also different. While SOMNCs may share some of the political and social goals of SOEs (such as stimulating employment or generating revenues), governments also expect them to invest in foreign countries in order to control a supply of raw materials, capture new technologies and know-how, and influence host countries for diplomatic, strategic, or military reasons.

The rise of SOMNCs raises numerous questions; to mention just a few: why did governments move state ownership into international markets? How do SOMNCs differ from private multinationals? How do majority-owned SOMNCs differ from minority-owned? In some cases, the extent of state ownership is minimal; at what point does state investment have no effect on enterprise behavior? We might expect that SOMNCs suffer from the same incentives that undermined efficiency in SOEs. But to what extent do global competition and private incentives counteract the forces of soft budgets, multiple objectives, and state interference? SOE performance varied across countries as different institutions influenced the behavior of governments and enterprises. Since SOMNCs operate internationally, does that reduce the influence of domestic institutions and state oversight and reduce the differences between SOMNCs from different countries? In particular, what incentives influence the behavior of the large Chinese SOMNCs? Many commentators are concerned that the political and national security goals of government owners affect the behavior of SOMNCs in ways that undermine global competition, but data are scarce. What are the effect of SOMNCs on global markets and their private competitors? What are the effects of SOMNCs investments on host country economies and polities, especially in developing countries where large SOMNCs sometimes overshadow local private and state actors?

This volume addresses some of these questions. Several chapters point out that the principal- agent problems that plagued SOEs are present in SOMNCs as well. Chapters also explore the complicated factors determining SOMNCs structures and behavior in China, India, and worldwide. Many of the volume's authors suggest that we need new theories and more data to better understand SOMNCs behavior and the full implications of SOMNCs for the world economy in general and the host and origin economies in particular. This volume makes a vital contribution toward plugging a gaping hole in our understanding of SOMNCs and pointing the way toward future research.

December 2016

Mary M. Shirley
President, Ronald Coase Institute

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State-Owned Multinationals: An Introduction

Alvaro Cuervo-Cazurra

State-Owned Multinationals as a Research Laboratory

The book *State-Owned Multinationals: Governments in Global Business* provides an overview of our current understanding of the behavior of state-owned multinational companies (SOMNCs), or companies that are owned by the government and that have value-added activities outside their home country. The study of these firms can yield interesting insights as a result of the changes in their defining characteristics. State ownership of firms has changed in recent decades, providing new avenues for deepening our understanding of the influence of governments in firms via ownership. In the past, state-owned firms were usually fully owned by the government; some were not even independent entities, but rather were part of the state infrastructure, with their accounts being included in the government budget. However, the deregulation and privatization process of the 1980s and 1990s resulted in a large variety of mechanisms by which governments can control firms beyond full ownership. Table 1 provides an overview of alternative types of government investment in firms. These include, in addition to full ownership, levels of ownership such as majority, minority, or even golden shares, which give the government the right to veto certain firm activities despite having little to no stock. The government can also indirectly control or influence the behavior of firms that are nominally private via other means such as convertible loans from state-owned banks, ownership by state-owned pension funds or ownership by sovereign wealth funds. Additionally, some state-owned firms have also been deeply transformed by their recent international expansion. Most state-owned firms were created with the purpose of aiding the development of the country and, thus, confined their activities to the domestic market. Those that ventured abroad did so usually via exports to facilitate sales and obtain needed foreign exchange, or to ensure the supply of natural resources to the country.

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Table 1 Types of state investment in companies

	State agency	Sovereign Wealth Funds invested firm	State pension fund invested firm	State bank loaned firm	State-owned firm	State majority-owned firm	State minority-owned firm
Legally separate firm	No	Yes	Yes	Yes	Yes	Yes	Yes
Budget	No separate budget	Separate budget	Separate budget	Separate budget	Separate budget	Separate budget	Separate budget
Ownership	Direct	Indirect via ownership by sovereign wealth fund	Indirect via ownership by state-owned pension fund	Indirect via convertible loan by state-owned bank	Direct	Direct	Direct
Level of ownership	Full	Minority investment in private firm by Sovereign Wealth Fund	Minority investment in private firm by state pension fund	Minority investment in private firm via convertible loan by state-owned bank	Full	Majority	Minority and/or golden share in private company
Types of managers	Civil servants	Professional managers	Professional managers	Professional managers	Civil servants/ professional managers	Civil servants/ professional managers	Professional managers
Level of government influencing firm	Central/ federal	Central/federal	Central/federal; province/state; municipal/city	Central/federal; province/ state; municipal/city	Central/federal; province/state; municipal/city	Central/federal; province/state; municipal/city	Central/federal; province/state; municipal/city

Source: Adapted from Cuervo-Cazurra et al. (2014)

However, the advances in communication and transportation technologies and the liberalization of trade and investment in the late twentieth century facilitated the global expansion of all firms, and state-owned firms became SOMNCs, investing abroad in a variety of activities, including sales, supply, production, technology, design, finance, etc.

As explained in more detail in Cuervo-Cazurra et al. (2014), the interaction between these two defining characteristics of SOMNCs, state ownership and multinationality, connects economics and political economy and their study of the state ownership of firms, with international business and global strategy and their study of the expansion and management of firms across countries.

This interaction poses interesting challenges to the usual explanations for the creation of state-owned firms. One economics-based explanation argues that state-owned firms are created by the government to address market imperfections, in which products and services that are beneficial to the country are not being provided in sufficient quantity or at a desirable price by the private sector. However, foreign direct investments by state-owned firms seem to challenge this logic, because such foreign investments would mean that the government is solving market imperfections on behalf of the host country government. Another political economy-based explanation posits that state-owned firms are created as the result of the ideology of some governments who prefer to maintain control over the economy or over particular economic relationships. Under this logic, foreign investments by state-owned firms would mean that the government is trying to impose an ideology of economic control over the economies of other countries. Thus, in both cases, we have an extraterritorial logic that challenges the traditional explanations of the existence of state-owned firms.

This interaction also poses challenges to the usual models of the multinational. The common explanation for the foreign expansion of a firm is to sell more and increase its profitability by exploiting assets and capabilities already developed more intensively, or to buy better raw materials, inputs, and/or factors of production and thus reduce its costs. However, government officials may steer SOMNCs to undertake activities in particular countries that may not have a direct business benefit but may instead have an important political benefit. These non-business objectives not only extend the realm of motives for internationalization beyond the usual ones discussed in the theory of the multinational, but also may result in unusual patterns of internationalization not well explained by existing theories of the multinational.

The Logic and Contents of This Book

These intriguing challenges to our conceptualization and understanding of both current explanations of state ownership as well as the models of the multinational are partially the impetus behind this book. The book contains a selection of the key contributions to our comprehension of this phenomenon published in *Journal of International Business Studies* (JIBS), the leading journal of international business research; as well as new material that provides detailed explanations of the phenomenon.

The book is organized into three parts. In the first one, Understanding our Understanding of State-Owned Multinationals, Aharoni (2017) provides a masterful account of the evolution of the literature on state-owned enterprises and SOMNCs, based in part on his deep involvement in the early analyses of the topic. The interaction between the ideology of governments regarding whether governments or markets were the most appropriate engines of growth, and economic events such as periods of growth and crises, account for changes in the relevance of state-owned firms and their subsequent foreign expansion, as well as the transformation of our understanding of these firms.

From this base, we move into a selection of some of the foundational articles published in JIBS on the topic of SOMNCs. The selection of the articles that appear in this volume was constrained by the length of the book and thus many worthy articles had to be left out in this volume. Additionally, since this is a JIBS collection, articles on the topic that appeared in other journals were not considered.

We start with the article by Vernon (1979) that provides a reflection of the state and impact of state-owned multinationals. It was surprisingly accurate in its prescription about state-owned firms then and has many insights that are still applicable nowadays despite the large changes in both the world and in the nature of state-owned firms. The article by Mazzolino (1979) that follows is part of a series of articles on SOMNCs that the author published. The one included here goes deep into the actual behavior of SOMNCs, analyzing how managers make decisions and how these decisions are affected by politicians and the government. One particular feature of this article is that it analyzes European SOMNCs, which were prevalent in the 1970s but receive almost no attention nowadays.

One reason for the drop in attention to these firms is that between the time this and the next set of articles were published, there was a dramatic change in the world of SOMNCs as a result of the mass-scale privatizations of the 1980s and 1990s. The prevailing economic model of high government intervention in the economy of the 1940s to 1970s, which saw the regulation of firms and in most countries the emergence of state-owned firms, came to an end. This was the result of changes in both the economic system, with the appearance of stagflation, i.e., economic stagnation and inflation, in the 1970s, which led to a rethinking of the ability of government regulations and state-owned firms to drive growth; as well as changes in ideology, with the adoption of the thinking of the Chicago School of Economics and its belief in markets as the engines of growth. These twin forces led to a reconsideration of the need for state-owned firms. Thus, governments in advanced countries not only deregulated but started mass privatization programs of firms that had been considered natural monopolies or strategic. This reduced the number of state-owned firms dramatically. In developing countries, governments also embarked on mass privatization programs in an effort to solve deep economic woes that had resulted in hyperinflation and crises. And most communist countries started a process of transition towards capitalism that was accompanied not only by the privatization of companies but also by the legalization of private ownership of firms and the creation of a legal and regulatory framework for

economic transactions. This global process of privatization of state-owned firms led to a refocus of the literature toward understanding both the privatization process and the behavior of newly privatized firms, to the detriment of the analysis of SOMNCs. As a result, there was mostly a lull in the literature analyzing SOMNCs from the 1980s to the 2000s.

In the late 2000s, however, there was a resurgence of interest in the topic. This was partly a result of the rapid expansion of a new set of multinationals from emerging markets (Cuervo-Cazurra 2012), some of which were state-owned and seemed to behave differently from the SOMNCs from advanced economies. It was also partly an outcome of the appearance of a diversity in the types of state-owned firms (majority, minority, indirect, sovereign wealth funds, etc.) that had not been considered in past literature when most SOMNCs were fully owned by governments. As a result of these changes, in the 2010s we witnessed a renewed attention to SOMNCs, driven primarily by the actions of Chinese state-owned companies, and to a lesser extent by those coming from other large emerging economies like Brazil, India, or Russia.

The second part, New Insights on a Renewed Phenomenon, reflects this change in the focus of analyses, which in the 2010s see a sudden and growing focus on the behavior of SOMNCs, particularly those from China. Thus, in this wave we have the article by Wang et al. (2012), which analyzes the drivers of foreign direct investment by Chinese firms, and the one by Cui and Jiang (2012), in which they study how state ownership alters the influence of home and host institutions on foreign entry mode.

To provide a further impetus to our understanding, 2014 saw the appearance of a special issue of JIBS edited by Cuervo-Cazurra et al. (2014), which sought to identify the unique features of SOMNCs and determine how their analysis could contribute to a better understanding of not only these firms but also state ownership and models of the multinational. Although that special issue contained seven articles, this book can only accommodate a few of them. The three included here are exemplars of how researchers can provide new insights on the behavior of SOMNCs. Choudry and Khanna (2014) analyze the international expansion of Indian state laboratories and highlight the importance of differences in the objectives of managers and politicians, explaining internationalization as an escape that some SOMNCs follow. Li et al. (2014) go deeper into the concept of SOMNCs by discussing differences in the types of governments that can own firms, whether central or local, and how these differences alter the behavior of SOMNCs. Meyer et al. (2014) introduce the liability of being owned by a foreign government and the challenges that such an association brings in foreign markets.

The third part of the book, The Future of Studies of State-Owned Multinationals, closes with a new article in which Lazzarini and Musacchio (2017) provide suggestions for future research analyzing SOMNCs. Based on their deep understanding of Brazilian SOMNCs and a comparison with SOMNCs from other countries, they suggest focusing on the new characteristics of SOMNCs. They explain how these change the relationships and influence the mechanisms that governments can exercise on SOMNCs and their subsequent internationalization.

In sum, SOMNCs are a fascinating phenomenon that can help identify new insights to gain not only a better understanding of these firms but also of the theories

of the firm and models of the multinational. Future research can benefit from a deeper appreciation of past research and the paths that it opened by analyzing these firms; this book provides a roadmap for guiding these efforts.

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Part I
Understanding Our Understanding of State-Owned Multinationals

The Evolution of State-Owned Multinational Enterprise Theory

Yair Aharoni

Introduction

State-owned multinational enterprises (SOMNEs) are an intriguing hybrid. Being state-owned, they are presumed to be state controlled and work to achieve political and social goals, though there is a large body of research showing that this presumption is far from exact (see, e.g., Aharoni, 1986, chapter 8). Being enterprises, they are assumed to produce goods or services and market them like any other business enterprise, but their political controllers direct them to achieve multiple other goals, such as generating employment, with no specification of the trade-offs among these goals. Finally, one characteristic of the global spread of operations of a multinational enterprise (MNE) is its ability to evade government regulations, including those of the home country's government. Does being state-owned make a difference? Specifically, is there a difference between SOMNEs and other MNEs in terms of the national interest of the home country?

This paper traces the evolution of research on the structure and behavior of SOMNEs. It examines the reasons for the creation of state-owned enterprises (SOEs) and the issues common to all SOEs, such as their control by government, their performance relative to private-sector firms, the behavior of their managers, and the differences, if any, between private and public entrepreneurs.

Since the paper covers a long period, it is important to keep in mind the major changes in political, ideological, and institutional environments, as well as the technological advances and economic development transformations of different nations that have occurred during this time. These shifts have had a profound effect on the policies of governments, as well as on the strategies and behaviors of SOMNEs. Indeed, it is very dangerous to be held captive by theories that were true in different times, different cultures, or different political regimes.

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Note that even though SOMNEs have existed at least since the 1920s, and state trading monopolies existed even before that time, research efforts before the late 1970s concentrated on SOEs in general – not on SOMNEs in particular. Additionally, very few IB researchers were interested in the relationships between MNEs and their host or home governments. Even fewer studied issues of ethical behavior or social responsibility. The economists that did study the operations of SOEs until the end of the 1970s were mainly citizens of European countries (e.g., Anastassopoulos, 1973; Dorenstein, 1976; Robson, 1960; Pryke,1971, 1981; Holland, 1972a, 1973, 1974) or other countries in which SOEs prevailed, such as India (e.g., Phatak, 1969, Lal, 1980). Later, SOEs also began to interest economists searching for ways to invigorate economic development in less developed countries. SOEs were created as a hybrid between private and public firms with the expectation that they would use private sector methods of work, and apply the strengths of the private sector to the pursuit of social goals.

Before 1970, there were very few SOMNEs. Even in 1981, only 5% of the foreign direct investments (FDIs) in the United States came from SOEs. These FDIs consisted of 124 entries between 1974 and 1979 (Aharoni, 1986, p. 367). For reasons explained in this chapter, SOMNEs then increased in numbers, geographical spread, and percent of total FDIs. According to United Nations Conference on Trade and Development (UNCTAD) (2014) estimates, SOEs play a major role in the world FDI market today. There are at least 550 SOMNEs – from both developed and developing countries – with more than 15,000 foreign affiliates and estimated foreign assets of over $2 trillion. Some are among the largest MNEs in the world. FDI by SOMNEs is estimated to have reached more than $160 billion in 2013, a slight increase after four consecutive years of decline. At that level, although SOMNEs constitute less than 1% of the universe of MNEs, they account for over 11% of global FDI flows. FDI by sovereign wealth funds, on the other hand, is negligible ($100 billion compared to a world FDI stock of $20 trillion). Research on the 200 largest non-financial MNEs identified by UNCTAD yields 49 SOEs that are MNEs. Their foreign assets together account for $1.8 trillion, and they have $1.1 trillion in aggregate foreign revenue. If we set the state ownership threshold to 50%, then 23 are owned directly or indirectly by states (with foreign assets of $570 billion); the other 26 have state ownership of at least 10% (with foreign assets of $1.16 trillion). The headquarters of 20 of these SOEs are located in developed countries, and those of the other 29 are in emerging markets. The foreign assets of those headquartered in developed countries at the time of this writing are substantially higher than those of the SOEs from emerging markets, but FDI by emerging market SOEs is expected to grow. China's SOEs, for example, comprise much of the country's growing outward FDI, and investment by Chinese firms is likely to grow up to $1–2 trillion.

Much of the succeeding discussion is based on my own long-term involvement in studies of SOEs, which began in 1962 when the Israeli economy was composed of three sectors. About 20% of GNP was controlled by the trade unions through Hevrat Ovdim (Workers Corporation), another 20% was composed of SOEs, and the rest was composed of privately owned firms. This unique structure

was a golden opportunity for research on possible differences among the sectors. At that time, I conducted a major field study of the role and behavioral patterns of boards of directors in the three sectors (Aharoni, 1963). Later I carried out another major field study, interviewing managers in the three sectors (Aharoni, 1984). In addition, I served for many years as a consultant to the Government Corporations Authority, a department of the Ministry of Finance overseeing all SOEs. I was also instrumental in designing a government corporation act based on the idea that an SOE should behave as a privately owned firm, with the proviso that the controlling minister can give it a specific written order to act differently, in which case the order is to be reported to the Knesset (Israel's Parliament). However, ministers did not like the idea of a written and publicly disclosed order, and the proposed act was modified in this respect during the deliberations of the Knesset.

In the 1970s, SOEs were perceived to a large extent as a means of accelerated growth. Thus, Development economists were the ones most interested in the operations of SOEs. A group of these economists from the Harvard Institute of International Development (HIID – including Malcolm Gillis, Richard Mellon, Leon Jenkins, and Gustav Papanek) and from Boston University (BU – including Leroy Jones) created the Boston Area Public Enterprise Group (BAPEG). They initiated international conferences, which led to the publication of an important book (Jones, 1982). At about the same time, Raymond Vernon noticed that various nations were nationalizing previously foreign-owned oil and mineral firms, thus acquiring ownership of an MNE or being involved in international operations and state trading, and developed nations were bailing out private firms by acquiring them. The governments of developed nations also established SOEs to compete internationally in areas of high technology such as atomic energy, passenger airplanes, and computers. They also bailed out ailing firms in areas such as steel, car manufacturing, and shipbuilding. Vernon became interested in these issues and coined the term SOEs for nationalized industries, government enterprises, or government-controlled enterprises. In 1978, I was appointed the Thomas Henry Carroll Visiting Professor at Harvard for two years, and Vernon and I initiated the creation of a data bank on SOEs. We were assisted by two excellent doctoral candidates – Ravi Ramamurti and Anil Gupta, who were employed as research assistants. I designed a questionnaire as a basis for data collection and we wrote summaries of the state of the art in the knowledge of a variety of topics related to the operations of SOEs, such as control, managerial discretion, performance evaluation, etc. In addition, we looked for scholars who were researching SOEs and invited several of them to a conference at Harvard Business School, resulting in the publication of a book (Vernon and Aharoni, 1981). Two other research assistants – Dani Rodrick and Brian Levy – searched the literature on the bauxite and iron ore industries, respectively. Both of them participated in a conference organized by Leroy Jones (Vernon and Levy, in Jones, 1982, Rodrick, in Jones, 1982).

In this chapter, I summarize the evolution of research on SOEs in market economies, mainly SOMNEs, concentrating on research by economists and by international business scholars. The studies of enterprises operating in a system of national

planning – and in fact most studies related to the Chinese SOMNEs – are beyond the scope of this summary, as are legal studies of SOEs and comparative political studies.

The paper is organized as follows. To provide a concrete framework for the subsequent discussion, Section "Reasons for State Ownership" highlights the reasons proposed for state ownership in market economies, stressing the reasons for state ownership of MNEs and for state trading. The section covers more than seven decades and points out the major changes in beliefs at different times during this long period. Section "Objectives, Control, Performance, and Managerial Behavior" briefly summarizes research from the end of World War II to the mid-1970s, dealing mainly with the relative performance of privately owned enterprises and SOEs and the variables proposed to explain the differences. It also summarizes research on management issues such as agency cost and the implications for the behavior of SOE managers. It further discusses the emergence of research on comparing public and private entrepreneurs and briefly reviews research on privatization. Section "The SOE in International Business" examines studies carried out in the 1970s on the international aspects of SOE operations, state trading, and SOMNEs by the few researchers that have paid attention to the operations of these firms. It then discusses the emergence of SOMNEs from developing nations, starting from around 1980. The section also summarizes the reaction of researchers from the United States to what they perceived as unfair competition by SOMNEs. Section "The SOMNE and the International Regime" summarizes the attempts to reach an international agreement on state trading and investment. It also summarizes the attempts of governments to protect their firms from acquisition by SOMNEs. Section "Implications for Future Research" suggests major implications for further research, and Section "Conclusions" concludes.

Reasons for State Ownership

The reasons for state ownership, the procedures for controlling these enterprises, the goals these SOEs are expected to achieve, and their level of accountability are all functions of the political regime of the state. Obviously, in a communist regime, all enterprises are state-owned. By the same token, in a regime in which all properties are owned by the king, all enterprises are state controlled. In fact, prior to the emergence of the market economies, the political and economic spheres were undifferentiated. Restrictions on the power of the sovereign were introduced only with what Polanyi termed *The Great Transformation* (Polanyi, 1944). The degree of restriction on the power of the sovereign state is, of course, different in different regimes.

In the 1930s, the developed world was composed of three types of regimes. Most countries were capitalist, some were fascist, and others were communist. At that time, the capitalist countries were suffering from the depression that followed the financial crisis of 1929, while the fascist and communist countries were doing much better in terms of economic growth. These regimes created many SOEs. In Italy, for example, the government bailed out banks that owned a large number of business firms, all of which became SOEs. In contrast, in 1989 the Berlin wall was

destroyed and a few years later the Soviet Union collapsed. Market systems were shown to be a much better vehicle for economic growth. In 2013, for instance, South Korea's per capita gross domestic product (GDP) was 18 times that of North Korea. In Africa, states that have emphasized import-substitution development, such as Zimbabwe, have typically been among the worst performers. Many SOEs were privatized. However, the belief in the superiority of the unfettered market then came to a juddering halt with the 2008 financial crisis, and calls for government interventions increased again.

The majority of IB scholars were educated as economists, and in the western world they mainly adhere to the model of markets in which only privately owned firms operate. Most of them also assume that the markets operate within an environment of democratic institutions, including the legal system, the parliament, and an independent central bank; that values are embedded in the institutional structure of the state; and that these institutions protect the market system from the capricious actions of the sovereign. Liberal economists also have a predilection for the existence of values such as individualism, respect for property rights, economic freedom, and equality before the law (Friedman and Friedman, 1980). Individuals in a market system all attempt to maximize their utility. The market is assumed to be efficient. A government is expected to regulate in the case of market failure. When it does regulate, it faces a problem of regulatory capture since both interest groups and regulators attempt to maximize their utility (e.g., Buchanan and Tullock, 1962). To be sure, economists interested in the Soviet Union did study the ways managers behave under a system of national planning, but the possibility of SOEs in a market economy in general, and SOMNEs in particular, was largely ignored.

The liberal economist's assumptions ignore the findings of political scientists on how decisions are reached by governments or how the pressures of different interest groups are weighed, and, importantly, the assumptions regarding human behavior. Political scientists, from Plato and Aristotle to Machiavelli, Hobbes, Locke, Rousseau, and Mill, assume that politicians will work for the benefit of the nation. To be sure, the importance of interest groups has also been acknowledged, including the ability of these groups to use the government apparatus to promote their own interests. Political scientists and philosophers have discussed the role of the state, its origins, the source of its legitimacy, and the best ways of governing it. In early human history, the legitimacy of the government was justified in terms of religion. The king's power was assumed to be derived from God. Later, the legitimacy of the state was explained as deriving from a social contract – citizens consent to cede some specific rights to a government, in order to avoid anarchy and mainly the calamities of endless fighting. Thus, the government, at least in democracies, is limited by this consent and any other privileges remain in the hands of the individual. In all democracies, governments must protect the fundamental human rights, such as the freedom of religion, of assembly, of movement, and of conscience.

In the early explanations, the consent was limited to protection of individual security. In recent centuries, the role of the state has been expanded, and the

government is now expected to provide compulsory education, welfare services, employment, and responsible fiscal and monetary policies. Since the end of World War II, governments are also expected to achieve goals such as economic growth and income distribution. This expanded role has also meant a shift toward a larger public sector and more SOEs, some of which diversified geographically and became SOMNEs. Different nations at different times have chosen wider or narrower roles for government responsibilities. Each nation chooses its economic regime, be it communist, socialist, fascist, or capitalist, and can apply different rules for different sectors. Today, political scientists also recognize varieties of capitalism, such as liberal market economies and coordinated market economies (Hall and Soskice 1991, Hall and Soskice, 2001).

Political scientists also recognize shifting policy paradigms that may be different for historical reasons. (Hall, 1990). They comprise a set of conceptual, normative, and symbolic elements that frame economic reality and define urgent policy problems while simultaneously offering types of legitimate policy solutions. Such a paradigm may change with time. It may be influenced by trends imported from other countries and may be different at different stages of development.

According to liberal economists, the only reason for government intervention in the market is the existence of market failure such as a natural monopoly. In such a case, the government may choose to regulate the privately owned monopoly or to establish a state-owned monopoly.

The United States, being an ardent believer in the market economy, prefers regulation. Even when there are compelling reasons to create a state-controlled and state-financed monopoly, the firm is not defined as an SOE. An example is AMTRAK, in which the members of the board of directors are nominated by the U.S. president.[1] The administration of George W. Bush tried to move part of AMTRAK to private investors and the board disagreed. In Europe, on the other hand, it is generally accepted that market failure calls for state ownership. Thus, Germany nationalized the railroads as early as 1879, France did so in the early 1900s, and Italy did so in 1905. These nationalizations may also have been motivated by the need to control enterprises essential to the military. For the same reason, in the 1970s European nations created SOEs in aerospace and computers.

Another reason is the desire to secure independent supplies of essential raw materials. Thus, several European countries acquired or established state-owned oil firms (some of which became MNEs) to secure the supply of oil for the country and specifically for the army or the navy. For example, Britain acquired a part of British Petroleum (then the Anglo-Persian Oil Company) in 1914 to secure oil supplies for the navy. In 1924, France established Companie Français des Petroles (CFP). In 1928, it enacted a law allowing CFP to regulate the oil supply and refine it. In 1929, it owned 35% of CFP. France also established two more SOEs to search for oil in

[1]Originally the board included 15 members, 8 of whom were elected by the president and approved by the senate, 3 by the common shareholders, and 4 by the preferred shareholders. Since there were no preferred shares, the board operated with 11 members. In 1981, Congress reduced the board to 9 members, all appointed by the U.S. president (Williams, 2001, p. 80).

its foreign territories. Elf Aquitaine was formed by merging three firms to exploit gas found in south France. It became a vertically integrated diversified SOMNE. Among other assets, it had a concession on the Iraqi oil. The firm was privatized in 1996, but the French government retained a golden share. Italy was also concerned with assuring its oil supply and established Agip to explore and produce oil outside Italy (Noreng, 1994). Agip lost its foreign concessions during World War II, but under the leadership of Enrico Mattei it later found gas. Subsequently, it became a subsidiary of Ente Nationale Idrocarburi (ENI).

Another related reason for state ownership is the belief that natural resources belong to the nation as a whole. When oil was discovered in the North Sea in 1960, both the British and the Norwegian governments made sure to have some rights in private concessions. In 1972, the government of Norway established an SOE – Statoil – in which it is a majority owner, to operate the oil field. Statoil is now the 11th largest oil multinational, operating in 36 countries. Its revenues are dedicated to the creation of a pension fund for all Norwegian citizens.[2]

State ownership has also been used to protect farmers by establishing marketing boards, as in Australia, Canada, and New Zealand.

Attitudes toward SOEs change with changes in the ideology of the ruling party. Thus, when the Labor Party came to power in the U.K. in 1945, they decided to nationalize what they termed the commanding heights of the economy, such as electricity and other infrastructure. In France, Renault was nationalized as a punishment for collaborating with the Nazi regime.

Another reason for state ownership is the urge to free the nation from what is perceived as foreign domination. To be sure, though the Latin American countries gained independence at the beginning of the nineteenth century from the empires of Spain and Portugal, as soon as they felt they could manage a foreign-owned oil field or mine and market its output they nationalized the enterprise, claiming that natural resources belong to the nation. Thus, Bolivia nationalized its oil in 1930 and Mexico in 1938, claiming that they had the right to nationalize natural resources without compensation according to the Calvo Doctrine.[3] In 1962, the UN general assembly adopted Resolution 1803, recognizing the right to nationalize natural resources but with proper compensation. Oil was also nationalized by other countries such as Saudi Arabia, Iran, and Iraq.

Following the major nationalizations by OPEC countries, other countries also nationalized iron ores, bauxite, and copper (see Vernon and Levy, 1982, for details on iron, and Rodrik, 1982, on bauxite).

[2]The Government Pension Fund (Statens pensjonsfond Utland, SPU) is a fund into which the surplus wealth produced by Norwegian petroleum income is deposited. Until January 2006 it was called The Petroleum Fund of Norway. As of 2 May 2016 its total value is NOK 7 trillion ($873 billion). (Norges Bank, 2016)

[3]The Calvo Doctrine is a foreign policy doctrine which holds that jurisdiction in international investment disputes lies with the country in which the investment is located.

SOEs have also been established to free certain government activities from bureaucratic rules. Examples are monopolies in alcohol, tobacco, and salt. In these cases, the SOE acts to a large extent as a tax collector.

Schumpeter's idea of destructive capitalism is not very well received by workers who might lose their jobs. In a democracy, these workers are also voters, and politicians aspire to be reelected. Thus, for example, in 1972 the Conservative government in the U.K. decided to bail out Rolls Royce as well as other so-called lame ducks. Indeed, a democratic government in a developed economy often changes from being a welfare state to being an insurance state (Aharoni, 1981) – rescuing individuals and mainly large business firms from bankruptcy or insolvency, particularly if these firms are "too big to fail". Such firms become state-owned. Of course, SOEs are also a means for governments to achieve their economic and political goals.

Stuart Holland (1972b, pp. 31–32) treats much of the postwar growth of state enterprises in Europe as a response to the challenge of U.S. multinationals.

At least since the industrial revolution, the world has consisted of many poor nations and a few rich ones. The international political scene after World War II was influenced by the cold war between the western capitalist nations and the eastern communist countries. Each of these blocks attempted to get more countries under its influence, but many countries chose to be "non-aligned" to either of the great powers. In the post-World War II period, a large number of nations gained independence from colonial states. Most were poor but enjoyed the power of votes in the various international organizations. Most of their leaders believed in the dependency theory, first articulated independently by Raúl Prebisch (1950) and by Hans Singer (1950), that poor nations allow developed nations to enjoy a high standard of living by providing them with natural resources, cheap labor, a destination for obsolete technology, and markets. The developed nations (the core or center) actively work to perpetuate the dependency of the poor nations (periphery) by various means – even the use of military power. To correct these inequalities, import substitution and capital control policies were recommended. Full integration, as advocated by free market economists, was perceived as an incorrect prescription that would only perpetuate the power of the rich nations. Development theorists also focused on the unequal international trade relations and what they saw as the negative consequences of the development of FDIs (Cardoso and Faletto, 1979; Evans, 1979). MNEs were considered an integral part of locking the poor nations in perpetual dependency on the center – unable to develop an autonomous process of technological innovation. They were perceived as an organ of the imperialistic power. In short, the study of the relations between MNEs and nation state started with the assumption, at least in Latin America, that MNEs should be avoided and their power should be tamed.

Developing and newly independent states saw SOEs as a fast means to economic growth. SOEs were established when a weak private sector was unable or unwilling to create desired enterprises, because of a lack of funds, competent managers, or the necessary technology.

When Margaret Thatcher was elected prime minister of the U.K. in May 1979, she embarked on a program of privatization of the British SOEs. The major lesson from research on the impact of privatization during this time was that firms should face competition in order to be efficient, and that, in fact, a privately owned monopoly might be worse than a publicly owned one (Aharoni, 1988). The most comprehensive study of privatization of monopolies is Ramamurti (1995). Several other countries embarked on significant sales of SOEs to private investors. Governments felt that most SOEs failed to deliver what was expected from them.

In the British case, the prime minister was an ardent believer in the ideology of private enterprise in market systems. In other countries, such as Germany and Mexico, the government, frustrated by continuous and significant losses of major SOEs, became disenchanted with state ownership. Economists at the World Bank also recommended privatization. The 1990s witnessed a wave of privatizations all over the world, mainly in Latin America, India, and the People's Republic of China, which attempted to move firms to a market discipline even if they were state-owned. With the growth of China's economy, there was also an increase in its outward FDIs. Many in the west perceived Chinese FDI as state-controlled and motivated by political objectives, and called for restrictions on such FDIs. China, on the other hand, was concerned with protecting its outward FDI and facilitating the operations of its firms investing abroad. The domestic private sector first exceeded 50% of GDP in 2005 and has further expanded since then.

In conclusion, SOEs were established in some cases because of an ideological belief that property should be owned by the state, representing all citizens. In the capitalist countries, in most cases, the reasons were more pragmatic – the desire to control supplies for military needs, an attempt to accelerate economic growth in the face of a weak private sector, or a political need to save jobs by bailing out an ailing firm. In many of these cases, the SOE was expected to achieve multiple goals. Unfortunately, the accounting and reporting system used by all of these firms is the same as the one adopted by private firms, This system measures one dimension only – that of profitability. Development economists may wish the SOE to achieve results based on social cost-benefit analysis or on more equitable income distribution. Unfortunately, there are no measurement systems that allow judgment of performance by such objectives.

Objectives, Control, Performance, and Managerial Behavior

At least until the mid-1970s, most IB researchers did not pay attention to the SOMNEs, most of which were engaged in oil exploration and distribution. Beginning in 1972, as many more SOMNEs were created, several researchers turned their attention to these firms. Yet much of the research on SOEs in general also sheds light on the operations of the SOMNEs. This section summarizes those research findings that are also relevant to the SOMNEs. Early research on SOMNEs is summarized in Section "The SOE in International Business."

Major Characteristics of SOEs – Hybrid, Autonomy, and Accountability

Clearly, to be able to operate as a business enterprise, the SOE must be an autonomous legal entity, separate from the bureaucracy of the government civil service. Therefore, it is incorporated under the general company law, and in some countries under a specific government corporation law. It is directed by an autonomous board of directors. Its accounts are audited by an independent auditor. The top management team is nominated by the board of directors and the employees are not considered civil servants, are not expected to abide by the civil service code, and are not remunerated as civil servants. In short, it is an autonomous business entity very similar to an investor-owned firm. The only difference is that in almost all cases the SOE cannot issue common shares on the stock exchange to the general public. Rather, it receives its initial capital from the government. In some cases, according to Phatak (1969), the government supplies less than the needed funds to ensure the management's dependence on the ministry.

The most distinctive characteristic of an SOE is that it is simultaneously a business enterprise, so it should enjoy autonomy, and also a state-owned entity so it should be accountable to its representatives. SOEs have generally been expected to work for the achievement of a national interest, not for the maximization of profits. What should be considered a "national interest" has remained ambiguous and is different in different countries SOEs achieve commercial goals that can be measured by profitability but are also expected to achieve multiple other goals. Such objectives may include employment generation, development of laggard regions, earnings of foreign exchange, independent supply of military needs, and more socially desirable income distribution. Unfortunately, these objectives are declared generally, without any guide as to the relative weight to be assigned to each of them. In fact, different controllers representing different ministries or parliament members may require the achievement of a different set of goals. The disconcerting fact is that the management of the SOE has to cope with an ambiguous set of objectives and does not receive any hint on ways of scaling the various goals. Political controllers refrain from any such scaling. Thus, Indira Gandhi, when Prime Minister of India, advocated a public sector for three reasons: to gain control of the commanding heights of the economy; to promote critical development in terms of social gain or strategic value rather than primarily considering profit; and to provide commercial surpluses with which to finance further economic development (Ramamurti, 1987a). Gandhi failed to specify the weight to be given to any one of these reasons.

An SOE's performance is measured solely by commercial profits. Several researchers have attempted to design ways of measuring social costs and benefits using concepts such as public profitability (see Jones, 1981), but these concepts are not easily applied in practice, either by government bureaucrats or by a minister. To date, no practical way has been designed to replace conventional business accounting with any measure of social costs and benefits. Further, in practice, even if maximizing profits is the only objective, it is difficult if not impossible to separate the results of efforts by managers and the impact of exogenous factors such as an unexpected

change in demand. Moreover, it is not always possible to distinguish between short-term and long-term results and the balancing of the two is problematic. Management theory recommends using strategic planning for measuring long-term factors. Again, these are not measured by conventional accounting. Add to these factors the asymmetry in expertise between the SOE and the government controllers and the fact that each brings a particular viewpoint on the weight that should be assigned to different goals – and the enormous difficulty of measuring performance becomes apparent. Recognizing these problems, economists at the World Bank began to advocate a system of comprehensive auditing of SOEs.

When analyzing accountability, it is helpful to distinguish among three different issues. The first is the functional problem: What are the functions, or the types of decisions, in which one would expect, require, or allow intervention of a higher authority? The second is the organizational aspect: Who, specifically, within the government organization, is responsible for the execution of the control, policing and detection functions? The third is the form in which the control is implemented. In addition, it is important to distinguish between the formal (or legal) controls and the actual day-to-day practices, in which some formal controls may never be used while other informal channels of control might be utilized. Further, a distinction must be made among the formal controls; the perceived control situation as seen by SOE managers, on one hand, and controllers, on the other hand; and the actual situation, which may be very different.

To be sure, the research described in this chapter is based on interviews, questionnaires or statistical analysis. None of the researchers had access to the oral discussions among the top management team members or between the management and their controllers. Researchers had no way of establishing whether or not a minister having a private conversation with a chief executive officer (CEO) asked to employ a certain active member of the party or to establish a plant in a laggard region, nor do we know the response of the CEO to such a hypothetical request. It is certainly very possible that such oral discussions took place and that as a result the SOE did employ a certain individual or even erected a plant in a laggard region. In other words, one cannot be absolutely sure that managers do not enjoy a high level of managerial autonomy, or that ministers, members of parliament, or civil service bureaucrats do not meddle in the affairs of the SOE. Only business historians allowed to track all correspondence may have a more definitive answer. Yet, the only study by a business historian of SOMNEs is the books published by James Bamberg (2000) on the history of British Petroleum. Even in this case, the author based his very interesting description on written documents alone, not on any private oral discussions. To be sure, managers may be proficient in convincing their controllers to accept their strategy.

Comparing Performance

Many studies have delved into the relative performance of SOEs and privately owned firms. A common problem with these studies is that performance is measured in terms of one specific goal such as profits or efficiency. Only when

performance is compared between SOEs and investor-owned firms in the same industry, and the only measuring rod is the profits of these firms, is it possible to reach definite conclusions as to the relative performance of the two types of ownership. Of course, the performance of SOEs should theoretically be judged by a comprehensive cost-benefit analysis. Yarrow (1986) summarizes 28 studies comparing the performance or the efficiency of SOEs and investor-owned firms in the same industry: airlines, appliance showrooms, electric utilities, fire services ferries, insurance, medicine, railways, refuse collection, steel, urban transit, and water. He concludes that even when the performance is evaluated on the basis of easily observable narrow yardsticks, one can reach at least tentative conclusions. Thus, a comparison of electricity firms in the U.S. concluded that the private firms were more innovative. However, Yarrow notes that a French electricity SOE was much more innovative in the use of peak load pricing. When the industry was more competitive, private firms did better in some cases, but a comparison of the privately and publicly owned Canadian railroads showed that the publicly owned firms were more efficient. The authors concluded that inefficiency is caused by lack of competition, not by ownership. Fortunately, from a research point of view, at least until the end of the twentieth century the performance of SOMNEs was gauged by measuring rods similar to those used in the analysis of private-sector firms. For example, one could compare the performance of British Petroleum to that of the other "seven sisters". In fact, BP, which was at that time state-owned, did not operate in a manner different from private investor-owned companies.

One interesting effort to deal with performance was made by Ramamurti (1987c). Based on government documents, he made a list of criteria to judge performance, including employment creation, export promotion, rapid growth in output and sales, import substitution, profitability, good employee relations, promoting technological self-reliance and independence, and promoting balanced regional development. He asked a group of Indian controllers to judge the performance of SOEs and gave them a set of different possible objectives of the firms. The respondents were government bureaucrats and also journalists. The average results from the journalists were low and were not included in the statistical analysis. "No bureaucrat placed a weight of more than 50% on profitability, and the average weight assigned by bureaucrats to this criterion was only 27.5%, which left it nevertheless with the highest average weight of all criteria" (p. 883).

Agents and Principals

Large firms in the real world are rarely owned by one individual and are even more rarely managed by the owner or his/her immediate family. Rather, firms are managed by professional managers. Economists expect these managers to manage the firm in a way that will maximize the profits of the owners. Indeed, a burgeoning literature on the topic suggests incentives that are expected to make the manager behave in ways that will maximize the profits of the owners. In SOEs, the citizens of the nation are the principal. However, these citizens do not design any incentive systems. They are represented by a variety of agents that are expected to control the SOE. Such agents

may include members of parliament, a minister of finance, a minister of state holdings, or a minister dealing with the area of operation of the SOE, such as agriculture, energy, industry or trade. Needless to say, each minister employs a whole gamut of civil servants and may direct the SOE to achieve very different objectives or follow very different strategies. Thus, the SOE manager is an agent without a principal (Aharoni, 1982). As a result, managers of SOEs enjoy a high level of discretion (Aharoni, in Vernon and Aharoni, 1981; Levi, 1987; Vernon, 1984). In the case of the Norwegian Statoil, Noreng (1980) described the firm as a state within a state.

In fact, the separation of ownership and control is a well-known problem. Since Berle and Means (1932), we know that managers do not necessarily follow the finance theory direction. The public administration literature suggests ways to curb the power of civil servants vis-à-vis their ministers. Management theory shows that managers in the private sector employ a variety of methods and techniques in order to increase their discretion and reduce their dependence on outsiders. Perhaps the most comprehensive available analysis of the way in which managers attempt to increase their autonomy in light of outside control is the one by Pfeffer and Salancick (1978). Although this analysis was carried out on the behavior of managers in private and non-profit organizations only, the arguments are valid for the case of SOEs too. The analysis describes various techniques used by managers to reduce dependence (pp. 6–108).

SOE managers enjoy two basic advantages over their government or parliament controllers, namely time and information. The managers devote all their working hours and thus much time to the management of the enterprise. Their controllers, on the other hand, are busy with many tasks and can devote only a minimum amount of time to the controlling activities. Moreover, the managers control the information on the activities of the SOE. This information is channeled to the controllers, but what is reported is largely at the discretion of the SOE managers. In many cases, the SOE manager is the expert on the line of activities for which he is responsible, and in this capacity guides the controllers as to how to negotiate international agreements over, for example, air traffic or oil. The result is that the controllers are to a large extent the captive audience of the managers on important issues. In short, professional managers in both the public and private sectors, at least in the western world, tend to be very similar – the manager's mind is not nationalized (Aharoni and Lachman, 1982). Business transactions are rarely carried out by individuals operating in a perfect market. Rather, most transactions – certainly those involving multinationals – are carried our between large firms, each of which is managed hierarchically. In an interesting comparative analysis of the functional vs. the multidivisional forms of structuring private enterprises, Williamson (1970) argues that the corporate headquarters management of a multidivisional firm is able to provide better control over the divisional management as compared to the control exercised by the capital market over the top management of a functional structured enterprise.

Of course, if incompetent managers are nominated solely because of their political affiliation, without regard to their managerial abilities, the situation may be very different. In other words, an important issue is the way that managers are recruited.

Yet it must be reiterated that SOEs are owned by the state, not by their managers. The agents of the state – parliament or ministers – have a perfect legitimization to choose the goals that the SOE should attempt to achieve, as well as the priorities among different goals and the strategy of the enterprise. The issue, however, is that the controllers may at least sometimes attempt to use this prerogative to achieve very narrow political interests, not necessarily those called for by the national interest. The solution, in my view, lies in visibility. A controlling authority such as a minister can direct an SOE to make a certain move only if the direction is given in writing and a copy is sent to an appropriate committee in the parliament. Since the accounting system of SOEs is based on profits, it might be appropriate to compensate the SOE for additional costs incurred in the implementation of that directive (Aharoni, 1977). Such compensation, however, may be regarded by the U.S. government as a subsidy, leading to the imposition of countervailing duties – an issue to be discussed in Section "The SOE in International Business.".

The way SOEs are expected to be accountable is by the creation of a system of hierarchical relations very much like the one used in private holdings entities. The management is expected to report to a higher authority such as a ministry of state holdings (as done in Italy) or a supervisory ministry. The ministry is also expected to design the strategy of the enterprise. However, unlike an investor-owned holding company, the people at the top are not also business people, who should at least, in theory, be better at managing a business firm. They are politicians working for the achievement of political goals. In most cases, their term of office is limited.

One result of this state of affairs is that accountability is not the same as control. Even though researchers that were raised and educated in the United States believe passionately that SOEs are controlled by governments to achieve political goals (e.g., Lamont, 1979) a large number of very successful SOEs are controlled by their managers. Much depends on the values and belief system of the managers.

Thus, Zif (1981) carried out an exploratory survey in 14 different countries in Latin America, Asia, and Africa. He points out that SOE managers are expected to fulfill different functions: "managing the business in the product or service markets and managing public support in the political markets . . . each organization has to strike a strategic balance between these two functions. The way this is done is indicative of the organizational orientation and political orientation in our terminology. The greater the relative emphasis on managing the business, the stronger is the business orientation" (Zif, 1981, p. 1326). He was able to show that some managers, mainly those who came from government, were politically oriented and others were more business oriented. The differences in behavior are described in seven propositions. Thus, political orientation means an emphasis on sales rather than profits; charging low prices relative to costs; relatively unstable goals that are stated in vague terms; irregular performance evaluations; managers seeking private support before acting; and finally, top management being recruited from the public sector.

Public Entrepreneurs

To be sure, managers in the private sector can tap funds in the financial markets and as a result take into account the desires of investors. By the same token, the literature on innovation and entrepreneurship portrays the entrepreneur inventing new products or creating new technologies as a maverick, motivated by the prospect of high profits for himself. Further, he can tap funds in the capital market largely because he is able to convince many individuals of the rosy prospects in terms of future profits of the new venture. By contrast, SOE managers cannot initiate a public offering of shares, nor can they promise profits to shareholders. They must convince the civil servants and ministers from whom they get their funds that the proposed project is indeed in the public interest and should be implemented and therefore financed. Further, SOE managers will not share in the profits emanating from the new venture.

Thus, it is often believed that SOEs cannot innovate – certainly not as much as privately owned firms. Yet the history of SOEs does show some great entrepreneurs that devoted their lives to the development of new ventures even though they did not get any dividends from them. Ramamurti (1986) specifically mentions Ozires Silva, a Brazilian air force veteran who created Embraer (Empresa Brasileira de Aeronautica S.A.), the very successful producer of light aircraft, and made it a multinational; Robert Moses, the master builder of many bridges, tunnels, and parks in New York; Enrico Mattei, who made AGIP into the great empire Ente Nazionale Idrocarburi (ENI), a multinational oil company that transformed Italy from being an oil importer to an oil exporter; Venkataraman Krishnamurthy, who as CEO of the Indian BHEL from1972 developed the company at a compound rate of 35%, diversified and integrated its operations, reorganized it to serve customers better, and won some impressive contracts for power systems in export markets previously dominated by private-sector MNEs; and Kenneth Abeyawickrama, who on becoming CEO of an ailing State Timber Corporation (STC), in three years improved its operations and diversified it into new fields.

One common denominator of these persons is that they were motivated by the need for achievement and by the quest for power, not by the desire for personal pecuniary gains. Second, they were all experts in managing the environment in which they operated and were able to convince their controllers and other stakeholders of the absolute necessity of the projects they advocated.

Ramamurti (1986) also researched several cases of the creation of state-owned high-technology firms by governments of less developed countries. Two of his cases are of Indian firms: HEC (Heavy Engineering Corporation), established in 1958, and Bharat Electricals (BHEL), established in 1956. In both SOEs, the Indian government was willing to spend large sums of money and to seek foreign exchange funds. Because of the source of its funds, BHEL enjoyed the transfer of technology from Russia and Czechoslovakia. HEC had many difficulties because its market did not grow as expected and it had to employ a large number of redundant employees. BHEL was more fortunate, facing a fast-growing market that grew much more than originally expected. Both firms were protected from

imports by high tariffs and several non-tariff barriers. BHEL has been very profitable and as a result enjoyed a high level of independence from the government.

In another paper, Ramamurti (1987b, also 1985) describes the history of Embraer. He concludes that from a policy standpoint, the Embraer case suggests that SOEs can be used by less developed countries (LDCs) – and sometimes only SOEs can be used by LDCs – to promote internationally competitive high-technology industries, although the odds of succeeding in such an endeavor are limited by the requirement that a number of necessary conditions – each one with a relatively low probability of occurring – must be simultaneously satisfied. These necessary conditions include: availability of human capital commensurate with the technological ambitions of the state venture; a large home market by international standards; an institutional design for the SOE that provides a measure of managerial autonomy and goal clarity; and the type of manager ("public entrepreneur") who has the combination of motivations and skills that make one effective at the helm of an SOE. I agree with these conclusions except the requirement of a large home market. My research of Israeli firms shows that they overcome the limits of the small size of the market by establishing a subsidiary in a large market such as the United States. Also, Ramamurti mentions many high-technology SOEs in Europe but fails to elaborate. These firms did not depend on technology transfers nor did they enjoy protected domestic markets.

Scholars who believe in individualism and profit maximization find it unbelievable that an SOE can be successful when innovation is a key factor of success, and neither the managers nor the engineers receive high financial remuneration as an incentive. Ramamurti shows that this belief is not always true. Engineers may be attracted by the technological challenges and top management may be motivated by the need for power and the challenges they are able to overcome.

In conclusion, SOMNEs – if managed by professional managers – may be as efficient, profitable, and technologically advanced as their counterparts in the investor-owned private sector. Both are a hierarchy, managed by professional managers that may be more motivated by the need for power or a burning desire for achievement than by financial incentives. To be sure, it may well be that this conclusion is culture-based and as such may be less true in the United States than in Brazil or Israel. Further, this proposition also depends on the control system and on the ability of the professional managers to use their discretion. The necessary conditions for a firm to operate efficiently should be sought in the behavioral theory of the firm (e.g., Cyert and March, 1963) or in a theory of resource dependence (Pfeffer and Salancick, 1978), but certainly not in perfect market based theories of liberal economics. MNEs, in both the private and public sectors, do not operate in such perfect markets.

Privatization

Ideology about markets plays a major role. Indeed, since the end of the 1980s, a plethora of SOEs have been privatized. Even though these firms were owned by the state and thus belonged to all of its citizens, their shares were not distributed

equally to all citizens. Rather, they were sold to private investors. This method certainly reduced the government's borrowing needs but did not make for a more equitable income distribution. For a summary of the major aims of privatization see Yarrow (1986, p. 327). Jones et al. (1990) suggested a theoretical cost-benefit analysis for the examination and measurement of whether privatization is worthwhile.

The SOE in International Business

Many SOEs operate in economic fields that are by their very nature domestic. SOEs such as an alcohol monopoly or public utilities such as electricity generation are obviously not candidates for export operations or for becoming an SOMNE. On the other hand, SOEs searching for oil, gas, or other minerals operate globally. Thus, state-owned oil firms search not only for oil but also for customers that will purchase the oil. In fact, multinational SOE oil firms have existed for quite a long time, both in advanced countries such as Britain and France and later in Norway but also in developing countries; examples of the latter are PEMEX in Mexico and Petramina in Indonesia. An overriding mission of the oil SOEs was to control geographically diverse sources of oil and gas to ensure the supply of energy to the citizens of the country as well as to the army and the navy. They were successful in achieving this mission and were then judged exactly like private-sector oil firms.

Additionally, a car manufacturer like Renault is as much an MNE as Ford or Toyota. In fact, even public utilities may become multinationals. The state-owned Electricité de France (EDF) acquired several electricity generation plants from the privatized British energy group PLC and controls 20% of the production in that market. It is the world's largest producer of nuclear energy. It owns plants in Europe, Asia, Africa, and the United States, serving 37.6 million customers in 2015 and employing 151,112 workers worldwide (EDF at a glance, see https://www.edf.fr/en/the-edf-group/world-s-largest-power-company/edf-at-a-glance). More recently, in partnership with the state-owned China General Nuclear Power Corp (CGN), EDF is building two nuclear reactors for electricity production in southwest England (The Economist, October 24, 2015).

In the 1970s, many developing nations nationalized previously foreign-owned oil and mineral firms. Vernon explained these moves in his classic paper on bargaining obsolescences (Vernon, 1971). In the same period, advanced nations nationalized large ailing firms in steel, chemicals, or automobile production and as a result became owners of firms that exported their production or also had subsidiaries abroad. Further, both Britain and Norway became owners of the oil fields in the North Sea. The French Elf Aquitaine acquired 63.1% of Texas Golf.

Early Research on the Reasons for SOMNEs

Several scholars have tried to understand the reasons for the creation of SOMNEs. Mazzolini (1979a, 1979b, 1980) conducted 304 extensive open-ended interviews in 123 organizations in nine EEC countries over the period 1975–1978 with many

critical decision makers: top managers of SOEs, government people, and some influential outsiders (primarily union leaders) to find out how key strategic decisions are made and applied. His major conclusion is that state ownership reduces the chance that a company will expand abroad and government policies usually tend to encourage domestic growth.

Mazzolini analyzed his data using two conceptual perspectives – a rational perspective and an organizational process perspective. Using the first perspective, he describes three obstacles. First, SOEs dealing with scarce raw materials are required to give priority to the exploitation of domestic resources, even if it is more costly, and to decrease the dependence on foreign suppliers. Second, the government's objective is to encourage the creation of strong national industries, focusing in particular on aerospace and computer firms, for military, political, and economic reasons. Preference is given to labor-intensive sectors in order to reduce unemployment, in particular in depressed areas. On the other hand, when the government wants to have special ties to a foreign country or when it needs to encourage exploration of raw materials, it asks the SOE to invest abroad. In these cases, SOEs are expected to avoid speculating against their home country's currency. A government can also pressure them to raise at least some of their debt capital abroad, thus reducing the need to export capital for foreign investments.

According to the organizational perspective, first, neither people nor organizations behave rationally, and second, organizations are an assembly of sub-organizations that bind together by agreed procedures and tend to maintain the status quo.

Mazzolini finds distortions in the implementation of new foreign ventures in two main areas: first, actions in the field did not follow the intentions of the planners; second, no action was taken and certain decisions were simply ignored.

To cope with such inefficiencies, an experienced SOE develops mechanisms that gradually evolve into a standardized pattern. The search for opportunities is done on a regular basis. Moreover, less formal government authorizations are required.

In their early international activities, the foreign and domestic operations of SOEs are strikingly similar, and foreign subsidiaries tend to adopt policies borrowed from national activities, like over-hiring and giving workers abroad the same social benefits as at home, without any local requirement to do so. Over time they develop policies more suited to local conditions.

In a very comprehensive study of SOMNEs, Anastassopoulos et al. (1985) analyzed all SOEs in three groups, what they termed "public multinationals", "public enterprises on the way to multinationalization", and "engineering firms". According to them, SOEs may be classified according to their propensity to internationalize, on the one hand, and the propensity of the government to intervene, on the other hand. They classified firms with a high propensity to internationalize and low level of government involvement as "quasi-private". Firms with a minimum propensity for multinational operations and a high level of governmental propensity to intervene are termed "pillars of development". Other firms such as Petrobras or YPF, which are classified as having a medium propensity for multinationalization and a high level of government intervention, are called "instruments of foreign policy" (pp. 206–227).

Vernon speculated on when and how SOEs will internationalize (Vernon, 1979). He sees SOEs as more vulnerable to the domestic political process than privately owned enterprises. They are expected to favor national sources. He further hypothesized that SOEs are more willing to export in order to earn foreign exchange. SOEs may be more ready to reduce prices because they are not expected to maximize profits and because of their ability to receive subsidized inputs (such as capital) and their capacity to cover deficits from public sources. Further, SOEs reduce prices to maintain jobs, increase revenues, and earn foreign exchange. SOEs are also reluctant to invest much in creating a permanent presence abroad, and to tailor products to the needs of individual foreign markets.

He further speculated that SOEs prefer long-term contracts and are loath to become multinationals. SOEs will tend to be drawn to one another in their international business, preferring such links to those with private enterprises, because governments that do business with one another are likely to designate their respective SOEs to act for them in the execution of their contemplated deals. Also, SOEs may be brought together by a common tendency to prefer commercial arrangements that last longer than those desired by private enterprises.

SOEs may still find themselves at a disadvantage compared to their private multinational competitors. This is evident first in industries that are granted special advantages due to their wide geographical spread, and second in the high-technology fields because of the excessive inflexibility that hampers SOEs. In such cases, SOEs will tend to enter into partnerships with private MNEs for two reasons: first, to ensure that their performance is equal to that of the competing MNEs in world markets, and second, to increase their autonomy in their relations with their home governments. Partnerships of this sort are second-best solutions from the standpoint of privately owned MNEs; they prefer a vertically integrated and closely controlled structure if possible.

Vernon concluded by noting that his projections were uncertain. On the one hand, SOEs may not develop in sufficient numbers to make any of his hypotheses important; on the other hand, they may develop in overwhelming numbers that will make it difficult for MNEs to survive and prosper. In reality, MNEs survive and prosper and a growing percentage of them are SOEs. One reason may be the changing attitude of governments. Another may be the learning process of the SOE. A third possible reason is that SOMNEs learned to acquire technology; being in the high-technology field does not protect a developed country firm from being acquired, nor is it a barrier for the SOMNE as Vernon hypothesized.

SOMNEs had to abide by the rules and regulations of the foreign countries in which they operated, as did private-sector MNEs. Yet there were at least two crucial differences. First, at least in the United States, many saw SOEs as state-controlled and state-subsidized and called for retaliatory measures against them. Second, so-called state trading is treated by GATT differently than private-sector trading (for details see Kostecki, 1982).

Indeed, countries such as the United States look askance at firms that are state-owned, and are therefore assumed to be state-controlled and attempting to achieve political goals, rather than trying to maximize profits. SOEs are also assumed to be

unfair competitors and the equity they received from the government is treated as a subsidy that is not permitted by international agreements. Further, even if the government subscribes to the idea of free international trade it also protects firms in its jurisdiction from any sign of what it considers unfair competition.

In the 1970s, several researchers in the United States published treatises claiming that the behavior of SOMNEs was predatory and that the equity capital they received from the government was and should be treated as a subsidy (e.g., Lamont, 1979). According to Walters and Monsen (1979), "these companies are heavily subsidized by their governments and are not required to earn profits comparable to those of their privately owned competitors . . . Why should private American companies observe the rules of free trade when a growing number of state-owned competitors are increasingly protected from the rigors of competition by government subsidies and preferential treatment?" (p. 160). They claimed that SOEs have distinctive advantages in their competition with privately owned firms: no need to earn profits, no fear of loss or bankruptcy, no need to pay dividends, preferential access to state financing, monopoly power, built-in markets, and hidden subsidies. They urged the U.S. government to stop what they called "beggar thyself and not thy neighbor" and levy high duties on imports by SOEs. Indeed, the U.S. Commerce Department determined in 1982 that equity capital of SOEs is a countervailable subsidy if the funds are given in a way inconsistent with commercial considerations from the point of view of an investor. The U.S. Trade and Tariff Act of 1984 allowed consideration of upstream subsidies such as pricing fuel at lower cost for the production of an exported product to be a cause of countervailing duties. Even much earlier laws of the United Sates allowed what was termed reciprocity.

An amusing early illustration of such issues is provided by Mira Wilkins (2004, pp. 103–108, 263–265). According to her, the British government denied the United States oil companies access to oil exploration in its territories throughout the British Empire. The U.S. government seems to have retaliated. The mineral lands leasing law of 1920 included a reciprocity clause dealing with "reciprocating countries". Shell Union Oil Corporation (what is today Royal Dutch Shell), one of the biggest foreign firms in the United States, was concerned that worse legislation and more punitive regulations might compel it to liquidate and withdraw from the United States, and therefore tried to prove again and again to the U.S. press that it was not controlled by the British government. Wilkins explains that this firm was controlled by the British government in fact but not in form. In 1923, the British started to think about removing restrictions in the empire against foreign capital (Wilkins, 2004, pp. 263–265). A request to the British Foreign Office on May 7, 1929, to end the restrictions in the British Empire for U.S. investments finally (after nine years of struggle) led to Shell Union Oil Corporation being able to start drilling on U.S. government land. The firm conducted business in all 48 states; it operated nine refineries and had 35,000 employees in the United States. It ranked eleventh in asset size among all "American industrials", and was fifth in asset size among U.S. oil companies.

As another example, Embraer offered long-term credit to its buyers. Fairchild, its major competitor, petitioned the U.S. International Trade Commission to

impose countervailing duties on the imports of the Bandeirante plane, charging Embraer with unfair trade practices, namely, offering below-market rates of financing. The ITC estimated that the net result of the lower interest was a discount on the price of the Bandeirante of between 9% and 20%. Embraer was able to convince the ITC that the plane had a comparative advantage in terms of reliability and delivery, as well as a better engine and versatility. The ITC ruled that predatory financing was not the sole reason for the Bandeirante's success and Fairchild's petition was denied. Still, the lengthy legal battle caused by such complaints is costly and increases the uncertainty of prospective buyers (Aharoni, 1986, p. 369).

The rapid growth of FDIs by Chinese SOMNEs raised all kinds of fears among western scholars as well as policymakers. Very much like in the 1970s, researchers from the United States claimed the competition from these firms was unfair and based on government subsidies and that being government-controlled they attempted to achieve political goals dictated by their home government. See Section "The SOMNE and the International Regime."

The Changing Relations of Home Governments to Multinational SOEs

In the 1960s, the then-state-owned Israel Chemicals Ltd (ICL), operator of the Dead Sea Works, identified an opportunity to acquire a chemical plant in Italy and thus gain access to the EEC. At that time, Israel had a regime of foreign exchange control and ICL needed the approval of the minister of finance for the allocation of the required foreign exchange. The minister did not approve the allocation. He allegedly said that "my role is to develop Israel, not Italy". In contrast, Mazzolini (1979b, p. 337) explained the decision of Renault to establish a plant in Canada as emanating from the policy of General De Gaulle to encourage Quebec's autonomy. In the twenty-first century, more and more governments are encouraging domestic firms to invest abroad, apparently in the belief that home-based MNEs are beneficial to the economy of the state. Indeed, the FDI by firms from emerging markets, many of which are state-owned, is increasing exponentially. Governments today are not neutral referees. They use the market to manage their economy and achieve national goals.

Governments are becoming more sophisticated in using the market to the advantage of their citizens by becoming owners of SOMNEs as well as by the designation of national champions in the private sector. Governments can protect and leverage, allowing only certain firms to benefit from these advantages. They have also learned to use the market to achieve political goals. One such goal is gaining independence in the supply of raw materials. Politics lead governments to establish national oil and gas corporations, or to finance the acquisition of high-technology firms as well as other types of SOMNEs. Some researchers refer to these tendencies as "state capitalism". This trend negates many assumptions of IB theory. Thus, IB theory assumes that MNEs "operate mainly in knowledge-intensive industries characterized by high levels of research and development (R&D) expenditure and advertising expenditure, and by the employment of skilled labor" (Buckley and Casson, 2009,

p. 1563). Therefore firms that lack these capabilities cannot compete against MNEs. In the 1980s, researchers noticed that firms from emerging markets, many of them state-owned, were becoming multinationals (Wells, 1983; Ghymn, 1980; Kumar and McLeod, 1981; Lall, 1983; Lecraw, 1977). These researchers attempted to explain how such firms could be MNEs. One explanation was that they used outdated technologies, produced low-priced products, and focused on labor-intensive production because of the abundance of inexpensive labor in their home countries. Another explanation was that they enjoyed a greater capability for adapting products to the specific demands of import-protected emerging markets. These advantages were relevant for operations in emerging markets, but not for competing against firms from free markets in advanced economies.

Since the 1990s, however, emerging-market MNEs have competed quite successfully in advanced and free-market economies, and some of them are becoming world leaders in their respective industries. They are challenging some of the world's most accomplished advanced-economy multinationals in a wide variety of industries, thus changing the competitive landscape. (Ramamurti, 2012).

One reason seems to be the reaction of firms from these countries to economic policy changes. Until the 1990s, these firms operated in a world of foreign exchange controls and high cost of information. The barriers to foreign operations were high and heavy protection of domestic enterprises allowed inefficiencies. Once the regime was changed and new technologies emerged, the cost of information was diminished and many domestic firms in all sorts of countries were able to internationalize. Liberalization in their home markets and years of protection made them vulnerable to foreign competition. Facing threats to their domestic dominance, some firms sought growth abroad. An increasing number of MNEs are based in emerging markets, and many of them are SOEs.

Two-thirds of emerging-market companies listed in the Fortune 500 are state-owned. So are many of the new multinationals. They acquired foreign firms first in developing and later in developed countries. Many of the acquisitions were motivated by the pursuit of strategic assets, mainly sources of supply of raw materials, such as iron, copper, or oil, and sources of technology and management know-how, such as intellectual property and brand names.

A study of the global white goods industry posits that the recipe for the success of Haier (China), Mabe (Mexico), and Arçelik (Turkey) has been "the ability to treat global competition as an opportunity to build capabilities, move into more profitable industry segments, and adopt strategies that turn latecomer status into a source of competitive advantage" (Bonaglia, Goldstein, and Mathews, 2007, pp. 380–381). They claim that "their experiences show that there are many strategies and trajectories for going global" (p. 369).

The revolution in information technology of the last four or five decades has meant that many of the liabilities of foreignness and distance no longer exist. For example, a three-dimensional blueprint can be sent by computer from an MNE's headquarters in the U.S. to a subsidiary in India and received in seconds, allowing the subsidiary to produce the part shown in the blueprint. Further, theory maintains that MNEs must enjoy firm-specific advantages such as a specific technology,

brand name, or other marketing abilities. In reality, it is possible that a government will direct a domestic SOE to acquire a foreign firm that possesses these firm-specific advantages. The government can also purchase research by foreign experts that will identify the firms worth acquiring. In other words, the financial services authority can be the government, financing specific knowledge by the acquisition of a foreign firm.

The emergence of SOMNEs from China was not well understood at first. Several researchers believe these firms do not have any ownership advantages and therefore will soon perish (e.g., Rugman and Li, 2007). More recently, several researchers have offered explanations for this phenomenon (Globerman and Shapiro, 2009). Most of these papers are reproduced in this volume and are not discussed here.

Concluding Remarks

How different are SOMNEs from private-sector MNEs? Both operate in oligopolistic markets, and both are giant firms managed as a hierarchy. To the extent that managers in both sectors perceive themselves as operating in the market for managers, they are motivated in much the same way. What matters is how managers and directors are chosen. If they are chosen for political reasons, then the managers may be more politically oriented. If they are chosen because of their professional qualifications, there is very little difference, if any, between an SOE and a well-managed private investor-owned firm.

A researcher that seeks to understand the operations of SOMNEs should distinguish these firms by the mission they were expected to achieve at the time they were established by the government. A few of these firms were established to search for oil or other raw materials in order to increase the independence of their home country. These firms were born as MNEs and their organizational routines were designed accordingly. In contrast, when developing countries nationalized the oil or other raw materials companies already existing in their territory, they cut off those firms from being owned by a vertically integrated and privately owned MNE. The major original mission of the new SOE was to find ways to market their product. The best way to reduce uncertainty was to seek long-term contracts and only later to establish marketing subsidiaries abroad. Such subsidiaries were in many cases acquired, thus getting a marketing channel faster. Manufacturing firms were established to provide domestic employment and were not expected to become SOMNEs. Italy in 1957 passed legislation requiring SOEs to locate 60% of their new plant investment and 40% of their total investment over a ten-year period in the Mezzogiorno. These requirements were later raised to 80% and 60%, respectively. Other governments have similar aims. Pryke (1971, p. 99) notes that British SOEs are loath to lay off labor. The path of these firms from domestic to international operations was not easy. Since the 1990s, many things have changed. More governments in developing nations have encouraged SOEs to go abroad, acquiring technology, brand names, marketing channels, and management know-how. The common denominator of all SOMNEs is that as they grew and began to have their own

internally generated funds, they became more autonomous and behaved very much like investor-owned private MNEs. Governments encourage the creation of home-based MNEs even though theory does not distinguish them from foreign-based MNEs.

The SOMNE and the International Regime

The relationships of nation states (NS) and MNEs are characterized by both common and conflicting interests, which have far-reaching implications for the economies in which the MNEs operate, as well as for the global economy. NS acknowledge the need to create international institutions and to reach international agreements to govern international relations. Yet governments are elected by citizens of the state and are expected to work for the benefits of these citizens. Each NS defines certain factors as being of national interest and these factors are expected to dictate economic activities. The national interest, over which there is always considerable disagreement, may be related to security matters, military goals and ambitions, social considerations, cultural heritage, or environmental protection. The definition of the national interest may also be a function of ideological beliefs and may change with time. In matters of important national interest, a government may even ignore private property rights and other human rights.

Since MNEs operate in a global context, an effort should be made to regulate them globally as well. In a world governed only by economic reasoning, there would be one global government to maintain law and order and protect private property rights. However, individual citizens communicate in 6,800 languages, they believe in different religions, and are a part of a diversity of cultures and heritages. They are citizens of 242 NS and inhabit dependent territories, of which 193 are UN members (http://www.Polgeonow.com/2011/04/how-many-countries-are-there-in-world.html). Most of these states were established after 1945, replacing previous colonial powers.

A group of 77 developing countries used their political strength in the 1960s to launch a study of MNEs (UN, 1973). One result of this seminal report was a United Nations General Assembly resolution declaring the establishment of a new economic order. Among other things, it called for "regulation and supervision of the activities of transnational corporations by taking measures in the national economies on the basis of the full sovereignty of those countries" (UN General Assembly, 1974). However, the efforts to formulate, adopt, and implement an international code of conduct, creating an international investment regime of relations and dispute settlement measures between national governments and MNEs, failed because of basic differences in national interests. The developing countries were interested in a code of conduct that would give them better means of technology transfer and other benefits to promote sustainable economic development and reduce the political power of the MNEs. The developed countries, on the other hand, were interested in protecting foreign investors against expropriation and in ensuring their freedom to repatriate profits. Sauvant (2015) describes the

negotiations on the matter and the reasons for their failure. Thus, the practical implications of the UN declaration were negligible (Ougaard, 2010).

At that time, all MNEs originated from developed nations – mainly the United States and Western Europe. Subsequently, MNEs emerged from Japan and South Korea, and starting in the 1980s firms from many emerging markets joined the ranks of MNEs. MNEs now originate from a diversity of countries. They operate in different economic sectors, and many are state-owned.

Some partial agreements on specific issues were successfully negotiated and agreed upon under the aegis of the ILO, OECD, UNCTAD, the World Bank and the IMF. (see e.g., ILO, 2014; OECD, 2011; UNCTAD, 2000).

The WHO members agreed to ensure the provision of safe and adequate nutrition for infants. (see WHO, 1981). This code may have been prompted by consumer groups that boycotted Nestlé, claiming that its aggressive marketing of breast milk substitutes, mainly in developing countries, was dangerous to infants. In 1984, Nestlé agreed to implement the code and the boycott was suspended.

All of the agreements described earlier relate to all MNEs, not specifically to SOEs. In 2008, under the aegis of the IMF, an agreement was reached on "Generally Accepted Principles and Practices" relating to sovereign wealth funds (for details, see Sauvant and Ortino, 2014).

The result is a fragmented institutional structure and difficulties in mitigating conflicts between the national interest and the MNEs. NS attempt to reach bilateral agreements.

A more recent attempt to reach international agreement on issues related to multinationals was the Helsinki Process, a major initiative of Finland's foreign ministry aimed mainly at improving global governance of non-governmental bodies (companies, NGOs, religious institutes, the media etc.) and encouraging dialogue and cooperation between different governmental and non-governmental stakeholders. The Process, which includes over 600 stakeholders from 70 countries, produced several reports with recommendations regarding global issues such as light weapons trafficking, violence against women, corruption, and healthcare. However, most of these recommendations were not implemented, because of difficulties in introducing multi-stakeholder cooperation into official international processes.

In November 2015, the European Union formally presented to the United States its proposal for a new system for resolving investor-state disputes under the Transatlantic Trade and Investment Partnership (TTIP) (see Gaffney, 2016).

Concerned as they are about state-controlled SOEs that do not necessarily pursue profit motives, developed countries have been increasingly attempting to regulate the unilateral entry of FDIs. There is also an increasing realization that not all FDIs are necessarily beneficial. In particular, trade union leaders are concerned about the loss of jobs, and governments may also succumb to lobbying from strong interest groups that call for protection from foreign competitors.

In the 1980s, the United States found itself facing the new reality of being not only a home country for MNEs but also a very desirable target country for foreign investments by Japanese firms. This created political movements that called for

government intervention. Congress enacted the Exon-Florio Amendment, and in 1988 President Reagan delegated the review process to the Committee on Foreign Investment in the United States (CFIUS), an inter-departmental agency that was established by President Ford in 1975 to review the national security implications of foreign investments in U.S. companies or operations.

CFIUS reviews begin with 30 days of deciding whether to authorize a transaction or begin a statutory investigation. If the latter option is chosen, the committee has another 45 days to decide whether to permit the acquisition or order divestment. Most transactions submitted to CFIUS are approved without the statutory investigation. However, in 2012, about 40% of the 114 cases submitted to CFIUS proceeded to investigation.

CFIUS has looked at restrictions on the sale of advanced computers to any of a long list of foreign firms, not only firms from countries like China and Iran but also firms from U.S. allies. In quite a few cases, a deal was called off when CFIUS began to take a closer look. The rise of emerging market FDI then led to the strengthening of CFIUS through the Foreign Investment and National Security Act of 2007.

Moran (2009) identified three types of foreign acquisitions of U.S. companies that may pose a legitimate national security threat. The first is a proposed acquisition that would make the United States dependent on a foreign-controlled supplier of goods or services that are crucial to the functioning of the U.S. economy and that this supplier might delay, deny, or encumber with conditions on their provision. The second is a proposed acquisition that would allow the transfer of technology, or other expertise that might be deployed in a manner harmful to U.S. national interests, to a foreign-controlled entity. The third is a proposed acquisition that would provide the capability to infiltrate, conduct surveillance on, or sabotage the provision of goods or services that are crucial to the functioning of the U.S. economy.

The possible harm to the security of the country is interpreted very widely. Thus, a foreign investment in ports was refused because the investors could possibly smuggle terrorists into the country. As another example, in 2012 President Obama took action prohibiting the acquisition and ownership of four wind farm project companies by Ralls Corporation, which is owned by Chinese nationals, and is affiliated with a Chinese construction equipment company that manufactures wind turbines. The report explains: “The wind farm sites are all within or in the vicinity of restricted air space at Naval Weapons Systems Training Facility Boardman in Oregon” (see CFIUS Annual Report to Congress, 2013).

Similarly, the Investment Canada Act enables the government to refuse to allow a foreign acquisition. Non-Canadians who acquire control of an existing Canadian business or who wish to establish a new unrelated Canadian business are subject to this act, and they must submit either a Notification or an Application for Review. Thus, on October 7, 2013, the Government of Canada rejected Accelero Capital Holdings’ proposed acquisition of the Allstream division of Manitoba Telecom Services Inc. since “MTS Allstream operates a national fiber optic network that provides critical telecommunications services to businesses and governments, including the Government of Canada” (see Canada, 2012).

Australia requires each FDI proposal to be reviewed by its foreign investments review board (FIRB): "The Government reviews foreign investment proposals against the national interest case-by-case . . . FIRB will work with an applicant to ensure the national interest is protected" (see FIRB, 2016).

In 2013, The Federal Republic of Germany also enacted a law, the Foreign Trade Act (Auflenwirtschaftsgesetz), that, among other things, allows restrictions on "acquisition of domestic companies or shares in such companies by non-EU residents if the acquisition endangers the public order or security of the Federal Republic of Germany" (Section "Implications for Future Research" of the act) and created institutions curbing FDIs for national security reasons. The EU leaves these issues to its member nations.

In contrast, according to its foreign ministry, Finland initiated the Helsinki Process to promote "the development of the rules-based international multilateral system. This is in the interest of Finland and all other small countries and actors because it restrains arbitrary action by the bigger actors."

A study of the World Bank Investing Across Borders (IAB) found that more than a quarter of the 87 countries surveyed have few or no sector-specific restrictions on foreign ownership of companies. Smaller countries have fewer restrictions on foreign ownership of companies, while larger countries – such as China, Mexico, the Philippines, and Thailand – are among those with the most. Countries in Eastern Europe, Central Asia, Latin America, and the Caribbean tend to be the most open to foreign ownership of companies. Governments are loath to be considered risky to foreigners for fear of losing the benefits of FDIs. In the race for FDIs, NS (especially small ones) are concerned that if they do not offer concessions, other countries will – and each country wants to be perceived as investor friendly.

As discussed before, large nation-states attempt to control the inflow of FDIs if an acquisition is found to be threatening national security. Yet, there is no mechanism to prevent foreign acquisitions that may create a global monopoly. As one example, the state-owned ChemChina acquired a multinational Israeli producer of fertilizer, Makhteshim Agan, in 2011 and is bidding against Monsanto to acquire a much larger producer, Syngenta of Switzerland, for $44 billion If such an acquisition materializes, ChemChina may have a significant global market power in the fertilizers market. Thus, the issue that should be of great concern to policy makers is that of the possible creation of global monopolies – a problem that seems much more crucial than that of state vs. private ownership.

Implications for Future Research

A major implication of this review of the evolution of SOEs in general and SOMNEs, in particular, is that it is extremely dangerous and even futile to base research on assumptions emanating exclusively from neoliberal economic theory. By definition, since the SOE is an organ of the state, its origin, the way its board of directors and top management team are selected, and the degree of discretion they enjoy depend more on political than other factors.

IB theory, following economic theory, assumes maximization of shareholder value. Political science, on the other hand, takes for granted that politicians work for the benefit of the nation. By the same token, sociologists stress allegiance to the family as well as to a community. Each one of these basic assumptions leads to different conclusions and to different policy recommendations. It would be nice if future research could show the circumstances and extent to which each of these views hold. At a more fundamental level, a major challenge is to reconcile the different ideas on the nature of the human being – from Hobbes' *Homo homini lopus est* to Locke's good nature, to the sociologist's allegiance to family and community. It would be even nicer if future research could shed light on the relations between culture and these differences. For example, it is argued that the Chinese do not believe in the superiority of individualism, which means that they do not cherish the right of individuals to enjoy monopoly rights on patents and copyrights. One result of this is that reverse engineering is quite common. Future research should attempt to support or reject these allegations. Note that the official policy of the Chinese government is to protect intellectual property rights.

Indeed, the most difficult question is the motivations of human beings. Political scientists assume that civil servants and politicians will be motivated to work for the national interest. Economists, on the other hand, following Bentham, assume that all individuals prefer to maximize their own utility and more specifically their own pecuniary gains. Anthropologists stress cultural differences and so on. The assumption that all economic activities are based on a free market does not hold in practice. Even the most ardent believers in the advantages of free market competition would agree that for markets to operate there must be institutions maintaining law and order. For markets to operate, a certain portion of activities must not be based on profit maximization. Judges, regulators, civil servants, and the police should not take bribes. They should not maximize their own pecuniary interests. Instead, they should pursue goals for the benefit of the nation. The challenge is to spell out who should not maximize his or her own profit and what is the optimal balance between those working for the national interest and those pursuing their own private gains.

The different assumptions about human motivations and therefore behavior have crucial ramifications. Neither political scientists nor economists, to the best of my knowledge, have ever tried to reconcile their different assumptions about human nature or suggest ways to decide on the optimal proportions between profit-maximizing individuals and government officials working for the benefit of the nation. Neither group is able to explain why some individuals strive to maximize profits while others pursue public benefits. Further, since in many cases individuals move from business operations to civil service and vice versa, how do those individuals change their behavior according to their different roles? Yet, a solution to these issues is important when the design of a reliable system to mitigate conflicts between MNEs and the national interest is being considered. Further, any theory in the social sciences must be adapted to changes in technology.

IB theory still attempts to function on the basis of universal rules alone. Thirty years ago I summarized my book on SOEs by calling for a contingency theory of

SOEs. Researchers are again urged to follow this suggestion. Any attempt to base our theory on certain immutable variables that are true in all cultures, all industries, and all regimes is doomed to failure. This is especially true for SOEs, since these enterprises are expected to achieve different objectives in different regimes and different cultures. We should think about which variables make a difference and develop a contingency theory of international business. One such variable is the industry. For example, the airline industry is governed by a regulatory regime designed after World War II that prevents airlines from globalizing through international acquisitions (Aharoni 2004). As another example, despite much talk about the globalization of healthcare, in most countries, it is still tightly regulated by the government. Medical tourism provides the only instance of the globalization of healthcare. A final example is accountants, which I have studied and found not to follow the theory about manufacturing MNEs (Aharoni, 1999).

A second variable may be the level of technology: it seems that high-technology industries are different in important ways from low-technology industries. For example, high-technology industries need a high level of research and development expenditures, and the life cycle of their products is very short.

A third important variable is the size of firms and the size of countries. As mentioned previously, small states are reluctant to enact laws that restrict inward FDIs or allow a review of such FDIs. One problem of a small country is that the probability of just a few firms dominating the national economy is very high. Such domination often results not only in economic consequences but also in the political influence of these firms.

Two other possible contingency variables are market structure and institutions, which differ across countries, possibly because of differences in national culture. Thus, institutions in the United States are based on a strong ideological belief in the superiority of the individual. Other countries' cultures cherish reciprocal aid among individuals in the community. The culture of *guanxi* (connections) in China leads to yet different institutions. Countries also differ in the degree to which their citizens rely on trust, loyalty, and authority relations. Note that the contingency variables mentioned earlier are not an exhaustive list.

Another issue that should be researched is whether or not home-based MNEs behave differently than domestic subsidiaries of foreign-based MNEs. From the point of view of a liberal economist, it makes no difference if the firm operating within its borders and under its jurisdiction is a subsidiary of a foreign MNE or a home-based MNE. There is also no difference if the members of the top management team of the firm are citizens of that state or foreign nationals. In reality, governments today not only race to get FDIs but also encourage domestic firms and perhaps mainly SOEs to invest abroad and become MNEs. Researchers should attempt to identify the perceived advantages to a nation state of being a home country for MNEs and what theory should be used to explain these benefits, if any. One possible hypothesis is that SOMNEs will refrain from moving a production facility to a country enjoying a lower cost of labor than will a foreign-owned MNE. Alternatively, it may be assumed that governments can force SOMNEs to refrain from such a move but cannot order the owners of private MNEs to leave the

production facility in their higher cost of labor country – these managers are expected to maximize the value of the firm for their shareholders.

Almost all the research on SOMNEs summarized in this paper analyzed firms from advanced economies, mainly firms based in Europe. Of course, we know based on the seminal works of Geert Hofstede that the culture of Asian countries is very different. Much more research is badly needed to discover the implications of these cultural differences on managerial behavior, performance, and mainly control of the different organs of government on the strategy of the firms. Specifically, since the People's Republic of China is governed in a very different manner and its culture is also very different, more research on managerial behavior and government control in Chinese SOEs is needed. As one example, the relations between managers and their controllers may be different. Note that in most Chinese SOEs, the board of directors includes at least one representative of the Communist Party.

In short, research must take into account a multitude of factors. Reliance on the assumptions and axioms of one discipline may give rise to very misleading conclusions. Further, as was demonstrated in this paper, significant changes in technology, attitudes of governments, and learning process of managers may make a theory – or at least part of it – obsolete. Clinging to old assumptions may turn out to be futile if not dangerous, leading the researcher to incorrect conclusions and mistaken policy recommendations.

This paper has surveyed issues germane to the operations of SOMNEs but has admittedly failed to propose feasible solutions for many of them. A solution may be achieved after some theoretical issues have been resolved. I strongly urge IB scholars to research these issues.

Conclusions

Almost everything has changed in the four decades since Mazzolini carried out his interviews. First, the policy paradigm of almost all governments has changed. In the 1970s, they pushed SOEs to increase domestic employment even at the cost of employing redundant labor. Today, many of them encourage their SOEs to go abroad and become SOMNEs. The old SOMNEs gained experience. They increasingly resemble investor-owned MNEs, and are not trying to rely on long-term contracts. The new SOMNEs are acquiring high-technology forms, not just suppliers of raw materials. Two things have not changed. First, SOMNEs are perceived by many in the western world as fully controlled by a foreign government that directs the SOE to pursue non-commercial goals. Further, it is taken for granted that the SOMNE is heavily subsidized and is often a threat to national security. It is also believed that SOMNEs are unfair competitors, and that their behavior is predatory. Second, all efforts to create an international investment regime have failed, world government is not a realistic alternative, and the giant MNEs – be they investor- or state-owned – are all operating in oligopolistic markets and many of them have become global monopolies, unregulated with regard to their global operations.

All governments of all nations are today much more active players in the economic field than they were a century ago. Their operations and their policies create an impact on all business enterprises whether private- or public-owned. They all race to increase the rate of economic growth and tilt their policies to achieve this goal. The profits of both private firms and SOEs are affected by the policies of the government. MNEs – again both private and state-owned – must take into account the policies of all governments of countries in which they operate. All of them also pressure these governments to grant them benefits that will increase their profits. These MNEs do not function in perfectly competitive markets. All of them manage the environment, not only the internal operations of the firm. Their managers enjoy a high level of discretion and so do not necessarily maximize the profits of the owners – be they private investors or the citizens of the nation. Since ownership and control are separated it is not always clear who controls these firms. Perhaps under different circumstances, different managers or their controllers are making the strategic decisions.

A complex hybrid such as the SOMNE cannot be evaluated solely by measuring rods assumed to be operative in the private sector, that is, by their profitability. At the same time, they must also be judged by assuming the world is governed by individuals attempting to maximize their profits. To understand how SOEs – and certainly SOMNEs – operate, one needs to adopt an interdisciplinary approach, borrowing not only from assumptions believed to be true by economists, but also to take into account political factors, as well as cultural differences. Further, the managers of SOEs, even though they are appointed by politicians and may be deemed to be motivated by political goals, are in most cases professional managers that at least in some nations behave in the same way as managers in the private sector. To be sure, these managers cannot always tap funds in the capital market and must convince their political bosses to allocate funds to the activities they recommend. Of course, if the firm they manage generates enough funds from operations to finance the projects these managers want to create, they may find it much easier to implement the projects. Most SOMNEs do enjoy the prerogative of generating their own funds. The research carried out by IB scholars provides the basis for a behavioral theory of SOEs. Such a theory should not only be based on liberal economics but should incorporate findings of political scientists as well as those of business historians. It should include findings from the literature on sovereign immunity and "non-commercial" goals, as covered by international treaties. It should also include the findings of legal scholars relating to the passage of laws on the scrutiny of inward FDIs for reasons of national defense.

Much of the research on SOMNEs has been descriptive, telling the reader a story about a firm or firms but rarely offering fundamental ideas about the reasons for operations of the SOE or about the relationships to government, or the impact on the growth of the home country or on that of host countries. Most researchers of SOEs have concentrated on managerial behavior or on the means of controlling the firm or improving its performance.

All in all, the landscape of FDIs has changed significantly. Many more home-country MNEs have emerged, and the owners of MNEs are not always private

but can be the state. The sectors in which FDIs flourish have changed and 80% of FDIs are acquisitions of existing firms rather than greenfield enterprises. Emerging market SOMNEs are used to acquire technology and management know-how or to gain access to minerals, oil, and gas. These firms go abroad to secure raw materials supplies, assure markets for their oil, and sometimes to establish upstream investments. The challenge to IB theory is to suggest practical ways to achieve national interests without losing the benefits of FDIs. Hopefully, future research will do so.

There have been profound changes in the attitudes of developed countries about the appropriate balance between investor protection and the right of the state to regulate. There is also a growing recognition that some FDIs are less beneficial to the economy of the host country than others and some even endanger national security or other vital interests. Unfortunately, attempts to create a comprehensive international regime have failed and governments are reluctant to rely on the goodwill and social responsibility of the MNEs when vital national interests are at stake. At the same time, governments are loath to be considered unfriendly to FDIs, particularly when their countries are small and weak.

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The International Aspects of State-Owned Enterprises

Raymond Vernon

Introduction

Those of us who are concerned with the problems of international business need very little reminding of the importance of state-owned enterprises operating outside of socialist economies. In oil, enterprises such as the National Iranian Oil Company and the British National Oil Company play a prominent role; in agricultural products, one finds entities such as the Canadian Wheat Board and the Japanese Food Agency; and in the high technology field, firms such as Rolls Royce and Aerospatiale. The prominence of these institutions in international business offers two challenges: to identify and master the problems in international business management that are distinctive to such state-owned enterprises and to envisage the changes in existing international business practices that such enterprises are likely to produce.

The Emerging Patterns

Origins and Motives

State-owned enterprises, it is safe to assume, have existed for as long as the states themselves. Joseph's grain speculations in Egypt were certainly not the first of these undertakings—and quite obviously not the last.

Thirty years ago, however, if one were undertaking an inventory of state-owned enterprises outside of the communist countries, most of these would have fallen into the category of public utilities. In a few countries, including

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Mexico and Italy, such enterprises were more pervasive. And in a few other countries, including Britain and New Zealand, some state-owned marketing boards were in operation—legacies of the Great Depression or of World War II. But the role of state-owned enterprises in international markets was on the whole quite secondary.[1]

Today, the picture is somewhat changed. State-owned enterprises are found in a wide range of industries both in the advanced industrialized countries and in the developing nations.[2] State-owned trading firms, charged with the international purchase or sale of some specified product for a given country, have proliferated.[3] Although private enterprises still predominate in the production and foreign trade of the market economies, the state-owned segment occupies a dominant role in many key areas.

Governments have acquired the ownership of enterprises under all sorts of circumstances and with a wide variety of motives. In many cases, the original motives for establishing a state-owned enterprise have had little to do with its subsequent operations; the activities of Renault and Ente Nazionale Indrocarburi, for instance, have been quite unrelated to the original reasons for the nationalization of these organizations. Nevertheless, the strategies of state-owned enterprises have not been wholly unrelated to the circumstances of their birth. It is relevant, therefore, to review some of the circumstances under which state-owned trading and state-owned producing enterprises have been brought into existence.

The Enterprise as Fiscal Agent

State-owned enterprises have been employed to levy taxes by selling at high monopoly prices (as in the case of the French and Italian tobacco and alcohol monopolies) or by buying at low monopsony prices (as in the case of Ghanaian cocoa). They have also been used to dispense subsidies through sales at reduced prices (as in the case of Mexico's CONASUPO).In many of these cases, the functions might just as well have been performed by a government ministry through a system of direct taxes or subsidies, but enterprises have been assigned the task simply as a matter of accident or of administrative convenience.

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[1]See Stuart Holland, "Europe's New State Enterprises," in Raymond Vernon ed., *Big Business and the State* (Cambridge, MA: Harvard University Press, 1974), pp. 25–26 for a discussion of the nature of European state enterprises prior to 1950; for the evolution of state firms in Britain, see Richard Pryke, *Public Enterprise in Practice—The British Experience of Nationalization After Two Decades* (London: MacGibbon & Kee, 1971), pp. 10–12.

[2]Leroy P. Jones, *Public Enterprise and Economic Development: The Korean Case* (Seoul, Korea: Korea Development Institute, 1975). John B. Sheahan, "Public Enterprise in Developing Countries," in William Shepherd ed., *Public Enterprise: Economic Analysis of Theory and Practice* (Lexington, MA: Lexington Books, 1976), p. 214 lists indicators of the relative importance of public enterprise in nine developing countries.

[3]M. M. Kostecki, "State Trading in Industrialized and Developing Countries," *Journal of World Trade Law*, May/June 1978, pp. 187–207, especially p. 205.

The fiscal function, in practice, proves to be almost indistinguishable from still another function commonly performed by governments in respect to agriculture—namely, the reduction in the risk that agricultural producers confront by virtue of highly unstable prices. By taxing in bonanza years and paying subsidies in lean years, state-owned enterprises are in a position to reduce the risks that agricultural producers normally confront.

In all such instances, of course, the financial statements of the enterprises must be interpreted with care. Large profits may reflect nothing more than the taxing capability of the state, implemented by the grant of a monopoly to the state-owned enterprise, whereas large losses may conceivably be the expression of a conscious policy of grants from the public purse to some part of the national population. Where losses do occur, it is not easy for an outsider to distinguish between those that represent a planned policy of income redistribution and those that are rationalized after the fact in such terms.

The Enterprise as National Champion

Governments have also taken to creating state-owned enterprises as a means of developing or maintaining an industry that the private sector seems unwilling to enter or unable to defend. Sometimes these enterprises are created because no private investor, local or foreign, is prepared to set up the wanted facilities. At other times, the objective in creating the state-owned firm is to ensure that the national industry will not be dominated by foreign-owned enterprises.[4] In both the advanced and the developing countries, one encounters numerous illustrations of both motivations—for instance, Brazil's principal iron ore producer, Companhia Vale do Rio Doce, and Venezuela's Sidor at different stages in their history exhibited one or another of these motivations. Aerospatiale in France and Rolls Royce in Britain, mentioned earlier, would fall in the same general category. In any case, the governments' ability to assume very large risks and their ability to provide capital on favorable terms were factors that made it possible to launch or to maintain such enterprises.

The Enterprise as Mobilizer of National Monopoly and Monopsony Power

Textbooks on international trade are filled with demonstrations of the fact that governments can improve their terms of trade by applying an appropriate tariff on imports or a tax on exports. Instead of attempting to produce that result through the relatively clumsy device of taxes or tariffs, however, governments in some countries—mainly developing countries—are trying to achieve the same

[4]Stuart Holland (see note 1), pp. 31–32, treats much of the postwar growth of state enterprises in Europe as a response to the challenge of U.S. multinationals.

objective through state-trading entities.[5] The export marketing boards in developing countries—such as, those that control the exports of Ghanaian cocoa and Colombian coffee—are charged in part with achieving that result. So, too, are the national oil companies of most oil exporting countries, such as Pertamina and NIOC.

It is worth noting, however, that arrangements for the mobilizing of monopoly or monopsony power are not confined to state-trading entities. Privately owned enterprises are organized also in some industries to exploit their potential market power: on the export side, the Webb-Pomerene associations of the United States, for instance; and on the import side, the buying agents in the Japanese coal trade and the German iron ore trade. Private arrangements of this sort, however, are typically wrapped in greater secrecy than their state-sponsored counterparts; so it is not clear what the relative propensities of the public and the private sectors may be in developing such arrangements.

The Enterprise as Official Agent in Bilateral Trade Arrangements

State-owned enterprises are particularly useful for countries, such as Brazil, that have entered into bilateral trade agreements with other countries designed to keep their two-way trade flows in balance. One object of such agreements is to ensure that neither party will have to pay foreign currency to the other in settlement of its transactions. In practice, that outcome generally requires a certain amount of management when one partner or the other proves to be the more effective seller. When imbalance exists, a country with a large contingent of state-owned enterprises, such as Sri Lanka or India, is in a position to right the imbalance by commanding such enterprises to buy their foreign requirements from the other trading partner, irrespective of commercial considerations. Actions of this sort are generally as darkly guarded as measures in the field of private restrictive practices; so once again, we are treading in largely unknown territory.

The Enterprise as Agent of Industrial Policy

Industrial policy itself covers a wide range of national objectives. State-owned enterprises in this category, therefore, are targeted at a heterogeneous set of goals. Perhaps the most familiar is the desire of governments to develop a lagging section of the country. In Italy, Britain, and France, among other countries, state-owned enterprises have often been commanded to take on the special costs of setting up and operating a plant in a backward area.[6]

[5]M. M. Kostecki (see note 3), p. 207.

[6]See John B. Sheahan, "Experience with Public Enterprise in France and Italy," in William Shepherd ed. (see note 2), pp. 158–160 for details of Italian state enterprise participation in development of the Italian South; see also M. V. Posner and S. J. Woolf, *Italian Public Enterprise* (Cambridge, MA: Harvard University Press, 1967), pp. 108–112.

Another familiar purpose of industrial policy has been to prevent senescent industries, such as shipbuilding and steel in some of the advanced industrialized countries, from folding up—or from folding up too rapidly—under the pressure of foreign competition. In this sort of function, state-owned enterprises have played an important role, acting as a conduit from the public treasury to support the troubled enterprise.[7]

In the field of industrial policies, the line between managing structural changes and managing cyclical changes can be very thin. Predictably, state-owned enterprises have been used for both. In Britain, Italy, and Mexico, among many others, state-owned enterprises have refrained from laying off their redundant workforce in periods of declining demand.[8]

Finally, state-owned enterprises are often called upon in some countries to exercise special constraints in raising prices.[9] How well they do in response to such exhortations has not been widely tested. The nearly universal losses of state-owned bus companies and railroads suggest that these public pressures may have some effect, thereby redistributing income somewhat in the countries where they operate. But whether the same effect can be discerned in enterprises that produce internationally traded goods is less clear,

A Multiplicity of Goals

State-owned enterprises, then, are born in ambiguity, an ambiguity to which their managers must be constantly responsive. Governments that have chosen to create such enterprises presumably expect something distinctive from their performance—something more than could be achieved by the promulgation of a tax or a tariff or a price regulation. That added something is presumably to be provided by the fact that the enterprise, although owned by the government, is a separate unit, distinct from the government and subject to a separate management; yet, at the same time, the enterprise must respond to a set of signals from government to which private managers would presumably be less alert—signals that relate not to profit but to other goals associated with the well-being of the nation.

In some circumstances, the multiplicity of goals would conceivably be manageable. If, for example, specific trade-off functions were laid down among competing goals, the manager might still be able to construct a strategy that was optimal when measured against the mandate to the firm. But governments are characteristically composed of a coalition of forces, each of which places rather different weights on conflicting goals. One ministry, therefore, may stress inflation goals, another employment goals, another budgetary goals; one politician will favor his area of the country, another politician his. And any of these elements in the coalition could

[7]"The State in the Market," *The Economist*, Special Report, 30 December 1978, pp. 37–58. See especially pp. 48–49 for a discussion of state support for the ailing shipbuilding industry.

[8]Richard Pryke (see note 1), p. 99, notes that British state firms are loath to lay off labor.

[9]See for instance Robert Millward, "Price Restraint, Anti-Inflation Policy and Public and Private Industry in the U.K. 1949–1973," *Economic Journal*, June 1976.

easily have some voice in determining the rewards and punishments meted out to the manager.[10]

The role of the manager is complicated by another dimension. The tenure of ministers in most governments is short—shorter in many cases than the tenure of professional managers in state-owned enterprises. By responding faithfully to the goals of one administration, therefore, the manager will not necessarily contribute to his career goals; the preoccupation of one administration to achieve budgetary balance, for instance, could easily be succeeded by the preoccupation of the next administration to maintain employment.

How managers live with the problem of responding to the conflicting and mercurial goals of government is a subject that has barely been researched in any systematic way. But the outlines of a set of generalizations are suggested even by the unstructured evidence.

A process of unceasing bargaining appears to be going on between most state-owned enterprises and the government bureaus, ministers, and politicians to which the enterprises are presumed responsive. As noted earlier, the government side is in a position to offer a variety of benefits. It can provide subsidized capital, underwrite unusual risk, provide protection from imports, forgive direct and indirect taxes, and offer exemption from government regulations. In return, state-owned enterprises can take on high-risk projects, hire unwanted labor, place plants in backward areas, hold down prices and profits, and tax some selected classes of customers while subsidizing others. To be sure, using the same ingredients, governments have been known to make bargains with private enterprises as well,[11] but the evidence seems to point to the general conclusion that the special relationships between state-owned enterprises and governments based upon such bargains are more extensive and intensive than those made with private enterprises. In some countries and some periods, as in Sweden today, the distinction may be slight; but in other times and places, the distinction is quite strong.

A second broad generalization is also suggested by the evidence. Managers of state-owned enterprises commonly try to increase their independence from the government apparatus, a tendency variously described as a desire for autonomy or discretion or increased bargaining power.[12] The underlying motives for this widely observed phenomenon are unclear. Perhaps managers feel more secure about their future if they are less reliant on government; perhaps they feel also that greater independence offers greater scope for self-expression and leader-ship. Whatever

[10]See Yair Aharoni, "The Public Sector as an Owner and Producer—The State-Owned Enterprise," ch. 9, in *Markets, Planning and Development—The Private and Public Sectors in Economic Development* (Cambridge, MA: Ballinger, 1977) for a discussion of the problems of controlling state firms.

[11]See Assar Lindbeck, *Swedish Economic Policy* (Berkeley, CA: University of California Press, 1974), p. 77 for a Swedish example; also Mario C. Ferrario, "Strategic Management in State Enterprises" (D.B.A. diss., Harvard Business School, 1978).

[12]Aharoni (see note 10), p. 275.

the reasons may be, managers are engaged typically in maneuvers that seem aimed at making them more independent of governmental decisions. Maneuvers of this kind include efforts to develop a cash flow that is independent of the control of their supervising ministries, as well as efforts to link up with foreign partners who are capable of providing resources that lie beyond national controls.

The manager's search for independence from government may appear to entail certain personal risks at times. But from the viewpoint of the firm as a whole, it represents a low-risk strategy. According to the record, state-owned enterprises that get into trouble as a result of an independent strategy are rarely allowed to founder; when the help of the government is needed again, that help is usually forthcoming. Numerous cases that support this generalization are to be found both in Europe and the developing world.

Juggling multiple objectives, negotiating for special support, and groping for increased autonomy, managers of state-owned enterprises operate under conditions that differ somewhat from those of their private counterparts. To be sure, none of these problems is unknown to the private sector; but their incidence seems on the whole less weighty. Exactly how these differences affect the behavior of the manager of the state-owned enterprise, however, is a subject that is not yet well delineated. This is a rich field for study by students of international business.

Some International Implications

Even without the requisite study of managerial behavior, however, it is possible to hypothesize where some of the international implications may lie.

The Propensity to Use Domestic Inputs

The domestic political process of most countries generally pushes government buyers toward a policy of buy-at-home—and even to a more restrictive variant, buy-at-home-only-from-local-enterprise.[13] Government-owned enterprises, we can assume, are more vulnerable to the domestic political process than are privately owned enterprises. That vulnerability would be especially great where the item being purchased consists of a steady flow of a standardized product over a sustained period—such as, an intermediate chemical; where, in addition, the only handicap of the domestic source is its relatively high price; and where the state-owned enterprise produces mainly for the local market. The expectation that the state enterprise will favor national sources would apply not only to state-owned enterprises engaged in production but also to state entities engaged primarily in trading.

[13]For government pressures on state enterprise purchasing policies, see K. D. Walters and R. J. Monsen, "The Nationalized Firm: The Politicians' Free Lunch?" *Columbia Journal of World Business*, Spring 1977, p. 95. M.S. Hochmuth cites the pressure brought to bear on Lufthansa by the German government in order to get the airline to buy the A-300B airbus (in which the German government has a substantial stake) in "Aerospace," in Vernon (see note 1), p. 158.

It may be, however, that state-owned enterprises have more freedom in some circumstances to draw on foreign products than do private firms similarly situated. For instance, in a country that imposes licensing controls on imports, state-owned enterprises working inside the governmental system may be in a favored position to secure authorization for the importation of foreign machinery.

In the end, therefore, we may find systematic patterns of behavior on the part of state-owned enterprises that range from less use of foreign inputs in some specified circumstances to greater use of foreign inputs in others.

The Propensity to Export

It goes without saying that state-owned enterprises will be exhorted by their governments to increase exports, and it is reasonable to assume that their disposition to respond to such pressures will be fairly high. But whether they will actually succeed in exporting at a higher rate than private firms is a more complex question.[14]

In the case of products that are undifferentiated by firm source, where the critical question to the buyer is one of price, it may be that state-owned enterprises are operating under a certain advantage. Their presumed ability to receive subsidized inputs, such as capital, and their reported capacity for covering unplanned deficits from public sources should render them more ready than their private competitors to reduce prices as a way of increasing exports.

The tendency to reduce prices may in fact be strengthened by another factor. The objective of governments in exhorting state-owned enterprises to increase exports will usually be to increase jobs or foreign exchange earnings rather than to maximize the firm's profits. It can be demonstrated that the firm which hopes to maximize jobs or gross revenues will tend to charge a lower price for its product than the firm which is maximizing profits.

The disposition of the state-owned enterprises to reduce prices, it would seem, will be enhanced even further in periods of declining demand. At such times, state-owned enterprises will be under particularly strong pressure to maintain employment and foreign exchange earnings. With the labor bill seen as a fixed cost and with cash flows assured, managers would find it hard to resist the temptation to cut prices.

Nevertheless, the ability of state-owned enterprises to achieve their export objectives through price reductions may well prove to have some important limits. The case of Venezuela's iron ore policy illustrates one such limitation. Venezuela represents one of that special subset of developing countries which seems to have adequate foreign exchange earnings for the present and which is concerned with protecting its domestic resources for long-term national use. In those

[14]A. Besant and C. Raj, *Public Enterprise Investment Decisions in India* (Delhi, India: The Macmillan Co. of India Ltd., 1977), p. 137 gives details of the export promotion policies of some Indian state enterprises though they claim that foreign exchange outlays for operating expenses by such firms often exceed their earnings of foreign currency.

circumstances, the state-owned enterprise may well be instructed to hold back its sales to foreign markets to a degree that would not be matched by a private enterprise. Moreover, political factors will sometimes play a part in such cases, stifling the urge to cut prices; the unwillingness to upset other sellers, especially other sellers from developing countries, may act as the added brake.

Apart from that special type of case, there is the more familiar case encountered in many oligopolistic markets which leads to price restraint. The price reductions of one seller may be matched by the price reductions of another, in a process that benefits none of the producers. Where that possibility exists, the established leaders in the market are generally loath to start the price-cutting process. To be sure, new state-owned firms in developing countries may not always be concerned about this sort of risk; lacking an established position in the market, some may see the advantages of price-cutting as exceeding the risks. Eventually, however, the risks of competitive price-cutting are appreciated by state-trading firms as they develop a market position and a background of experience; witness the restrained price policies of the Soviet Union in oil, aluminum, and diamonds.[15]

Another constraint on the exports of state-owned enterprises may be found arising from a different source; namely, from an indisposition to make any very elaborate commitments to the requirements of foreign markets. Here and there, one sees concrete manifestations of such a tendency, as parliaments and ministries complain over some investment in a foreign market by one of their state-owned enterprises. That tendency, if it actually exists, would be expected to manifest itself in a number of different ways: first, in a reluctance to invest much in creating a permanent presence abroad, especially if it entails the sinking of real resources; second, in an indisposition to tailor products to the need of individual foreign markets. If those tendencies in fact exist, state-owned enterprises may prove to be handicapped in the marketing of a wide range of goods.

Links Among State-owned Enterprises

It seems reasonable to anticipate that state-owned enterprises will tend to be drawn to one another in the conduct of their international business, preferring such links to those with private enterprises. One reason for this expectation is self-evident: Governments that find it convenient to do business with one another are likely to designate their respective state-owned enterprises to act for them in the execution of their contemplated deals; swaps of oil for technology, for instance, have brought the state-owned enterprises of Europe into various partnerships with those of the Middle East.[16]

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[15]"Probing the Club," *The Economist*, 23–29 September 1978, p. 97 gives details of cooperation between western aluminum producers and Soviet exporters.

[16]Louis Turner, *Oil Companies in the International System* (London: George Allen & Un-win, 1978), p. 180 notes bilateral agreements between OPEC countries and various European (and Japanese) governments.

In addition, however, state-owned enterprises may be brought together by a common tendency to prefer commercial arrangements that are longer in duration than those desired by private enterprises. The reasons for that expectation are conjectural. But one possibility is that state-owned enterprises, especially those that serve their own national markets, feel a greater sense of assurance and security about their place in the domestic market than do their private counterparts and hence, a greater willingness to tie up their sources of materials for the long pull. Another possibility is that state-owned enterprises in general have fewer fears of long-term commitments than do private enterprises simply because their downside risks are lower. If such a commitment eventually proves to be a handicap to competition, the state-owned enterprise need not worry about the possibility of bankruptcy; either it will be relieved of its obligations through government intervention or it will be bailed out of its difficulties by government subsidies. Meanwhile, some of its planning uncertainties will have been reduced by the presence of a long-term agreement.

The disposition of state-owned enterprises to accept long-term commitments plus the semi-official cast placed upon the business activities of such firms suggest that they may especially be disposed to enter into regulatory international agreements, drawing on the patterns of the private cartels of pre-World War II and the official commodity agreements of the postwar period. That expectation is even more plausible if it should turn out that state-owned enterprises were indisposed to create overseas subsidiaries. Overseas subsidiaries are commonly used by private enterprises to create vertically integrated structures which buffer the participants from the risks of the market. If that strategy is not quite so available to state-owned enterprises, they may be more strongly disposed to turn to other arrangements to reduce their market risks, including the cartel and the commodity agreement.

Links with Multinational Enterprises

Despite the special strengths of state-owned enterprises, such enterprises may still find themselves operating at a disadvantage as compared with their private multinational competitors.

The disadvantage is likely to be most in evidence in those industries in which wide geographical spread bestows special advantages on the firm. On the assumption that state-owned enterprises will find it difficult to invest widely abroad, such enterprises may be unable to capture all the potential advantages that exist in such situations; for example, it is easy to contemplate that private enterprises will retain some considerable advantage in the global distribution—though not necessarily the production—of oil and minerals. State-owned enterprises that are created through the nationalization of private companies commonly retain such companies as distributors of their product. In Venezuela, for instance, state-owned iron ore is distributed in part by U.S. Steel; in Guyana, state-owned bauxite by Alcan; and in most of the Middle East, state-owned crude oil by multinational oil enterprises.

A second situation in which private enterprises may succeed in maintaining some advantage over state-owned enterprises is in some of the high technology fields, especially in those cases in which economies of scale are important yet

flexibility must be maintained. Situations of this sort are sometimes encountered when enterprises are engaged in a large-scale development program on a technological frontier. State-owned enterprises—and, a fortiori, consortia of state-owned enterprises—have often been hampered by excessive rigidity in such situations.

In such cases, state-owned enterprises will find it useful at times to enter into partnerships with private multinational enterprises.[17] State-owned enterprises are likely to have two reasons to enter into such partnerships: (1) in order to ensure that their performance is equal to that of the multinational enterprises with which they compete in world markets, whether in the distribution of goods or in the application of advanced technologies; and (2) in order to increase their autonomy in relations with their home governments.

Illustrations of partnerships between state-owned enterprises and multinational enterprises are already quite common. These are embodied in licensing agreements, joint ventures, and management contracts which often assign to the private multinational partner a considerable role in the operation of the facilities of the state-owned enterprise. In some cases, the foreign partner is the source of important technology; in other cases, the foreign partner is the marketing agent. From the viewpoint of the privately owned multinational enterprises, of course, partnerships of this sort are second-best solutions. The preferred solution would usually be a vertically integrated, closely controlled structure, if that were possible. But on the principle that half a loaf is better than none, one can anticipate that privately owned multinational enterprises will continue to enter into such arrangements.

My present guess, therefore, is that the substantial growth of state-owned enterprises might inhibit the expansion of multinational enterprises; but that multinational enterprises would adapt to some extent by a change in role. As a result, there may be room for substantial cooperative activity between the two groups of enterprise.

Conclusion

What is uncertain about such projections, however, are the relative weights of the various tendencies described. On the one hand, state-owned enterprises may not develop in sufficient number to make any of these hypotheses terribly important. On the other hand, they may develop in such overwhelming numbers that the multinational enterprise finds it difficult to survive and prosper. Getting a keener sense of the relative weights of these various tendencies should be one of the important objectives for future research in this field.

[17]See Peter Evans, "Multinationals, State-Owned Corporations, and the Transformation of Imperialism: A Brazilian Case Study," *Economic Development and Cultural Change*, October 1977, especially pp. 54–56, for a discussion of how a tripartite arrangement among multinationals and domestic private and state capital provided the Brazilian petrochemical industry with access to international capital, management, and technology while retaining the advantages of domestic ownership.

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European Government-Controlled Enterprises: Explaining International Strategic and Policy Decisions

Renato Mazzolini

Introduction

This paper explains the international behavior of European government-controlled enterprises (GCEs)—why such companies do or do not have international activities, and if they do, what, if anything, is distinctive about such activities and why.

GCEs, that are to operate as commercial undertakings producing and selling goods and services demanded by the market in competition with private sector firms, are distinguished from public monopolies or companies operating under severe constraints, which serve the collective by providing more attractive or cheaper goods and services than would allegedly be available if supplied by private sector companies operating under free market conditions.

These companies' strategic decisions—the determination of the basic long-term purpose of the enterprise and the adoption of courses of action consistent with this purpose: those decisions which define the fundamental mission of a firm in terms of goods or services to produce and markets to serve—and their policy decisions—the definition of the basic modus operandi of the firm: the ground rules by which an organization functions—are important foci. Further, international behavior is observed: the strategy and policy decisions of MNCs or decisions which eventually lead a company to become an MNC. Typical decisions are, thus, foreign direct investment decisions or major transnational joint venture decisions.

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In recent months a number of studies dealing with GCEs have appeared.[1] These studies have one common characteristic: they look at GCEs from the outside and fail to uncover the mechanisms whereby they function internally, often yielding serious misconceptions.[2] Instead, we should observe in a systematic way what happens within GCEs in order to understand and predict their actions. This is done from two conceptual perspectives-a rational perspective, in which corporate behavior is explained via postulated goals; and an organizational process perspective, whereby behavior is explained by the bureaucratic procedures governing corporate decisions.[3] These afford two lenses addressing different issues and yielding different answers—different yet complementary.

This study entailed 304 interviews in 123 organizations through the nine EEC countries over the 1975–1978 period. They included the critical decision-makers: top managers of GCEs (as well as certain individuals such as staff persons who are in positions to observe leaders closely); government people: cabinet members, key congressmen, and relevant civil servants; and some influential outsiders: first and foremost, union leaders. Given the sensitive nature of much of the data, their identities remain confidential. Interviews took the form of extensive open-ended discussions designed to ascertain how key strategic decisions are made and implemented.

A Traditional Perspective

The Theory

To explain a particular action or pattern of behavior of a company, an observer typically personifies the company, more or less subconsciously, comparing it with an intelligent individual, and asks, "If I were the company, what reasons could push me to act in this way?"

This view conceives of corporate behavior as integrated, goal-directed, and consequent activity. Firms are seen us unified, purposive, and rational organizations. What must be explained is an action that is assumed to reflect a purpose or intention and to be a calculated solution to a problem, and how the behavior could have been chosen logically in light of the company's objectives. The inference pattern runs as follows: "If an [organization] performed a particular action, that

[1]Douglas Lamont, *Foreign State Enterprises* (New York: Basic Books, 1979); Kenneth D. Walters and Joseph Monsen, "State-owned business abroad: new competitive threat," *Harvard Business Review*, March–April 1973; Hugh Menzies, "U.S. Companies in Unequal Combat," *Fortune,* 9 April 1979.

[2]See Renato Mazzolini's review of Douglas Lamont, *Foreign State Enterprises* in *Political Science Quarterly*, Winter 1979–1980.

[3]Renato Mazzolini, "Explaining Strategic Behavior: An Organizational Process Approach," Research Working Paper No. 172A (New York: Columbia University, Graduate School of Business, 1978).

[organization] must have had ends towards which the action constituted a maximizing means. The puzzle is solved by finding the purposive pattern within which the occurrence can be located as a value-maximizing means."[4]

This conception is the foundation of most classical treatments of organizations' behavior-those of political scientists, economists, management scholars, and international business students.[5] The typical firm is viewed as striving toward the maximization of shareholders' wealth. Its actions are taken to be understood when plausible motives can be put forth that make these actions appear as intelligent choices.

GCEs' Actual Behavior

Hindrances to Foreign Expansion

Three areas of hindrance must be described. In varying degrees, governments have a set of policies designed to stimulate and regulate the development of certain sectors. GCEs in such sectors are under pressure to comply with these policies although their compliance may inhibit international growth. Two types of cases in particular are noteworthy.

First, consider GCEs dealing with scarce raw materials such as oil. The aim of government policies is to enhance national independence and the safety of the country's supply. Whenever possible, priority is given to the exploitation of domestic resources. A high-ranking government official said:

> For reasons of national independence, the government wishes national resources to be exploited even when it is cheaper to rely on imported resources. When these resources are not otherwise economically attractive enough for a company to exploit them on its own, the government puts pressure on a GCE to do so. This is clearly to the detriment of foreign expansion.

The British National Oil Corporation was created primarily to guard Britain's interest in the exploitation of the newly found national oil.[6] Elsewhere, ENI and ERAP are also under pressure to seek natural resources at home. ENI in particular provides a good illustration, as found by Shonfield:

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[4]Graham Allison, *Essence of Decision* (Boston: Little, Brown, 1971), p. 33.

[5]Direct investment theory suggests that a company pursues the aim of investing in those countries where the marginal productivity of capital is highest [see Stefan Robock and Kenneth Simmonds, *International Business and Multinational Enterprises* (Homewood, IL: Irwin, 1973) p. 19]. Vernon's product cycle model implicitly builds on a learning process: production is gradually transferred abroad as the production process matures; it is therefore assumed that the company has a strategy of going abroad with the more standardized of its products [Raymond Vernon, "International Investment and International Trade in the Product Cycle," *Quarterly Journal of Economics*, May 1966, pp. 190–207]. And the more comprehensive formulations such as Fayerweather's also assume a rational decision-making model [John Fayerweather, *International Business Management* (New York: McGraw-Hill, 1969)].

[6]See The British National Oil Corporation, "Report and Accounts" (London, 1977).

> Its great achievement in the 1950s was the exceedingly rapid development of the newly found reserves of natural gas in North Italy. It is highly improbable that any of the international oil companies…would have done the job with equal speed. The other alternative, an indigenous private enterprise organization, could hardly have matched ENI's high-speed performance in bringing to Italian industry all the supplies of the newly discovered natural gas that it could use, in so short a time. The speed with which any normal private business would have set about the venture would have been determined by commercial criteria, such as the desire to husband reserves or the wish not to disrupt other established supplies of fuel, which would have slowed down the process. Indeed it is sometimes argued that ENI's pace was excessive: the consequence is that known Italian reserves of natural gas are in danger of being exhausted in a matter of a few years. However, those who took charge of Italian gas development were guided by other considerations than this. They were, of course, anxious to make a profit; but their main objective was to apply to the national economy the stimulus of plentiful domestic fuel for industry at a cheap price.[7]

When there are no adequate natural resources at home, the thrust of governments' policies is to decrease the dependence on foreign suppliers by increasing national autonomy via national GCEs.[8] Managers in all of these GCEs reported that the government pressures them to become directly involved in the production process and to do as much as possible of the refining at home, notwithstanding the fact that this is often more costly. Similarly, at the marketing level, all the companies interviewed said that their mission was, first, to secure a strong share of the domestic market so that the country is not overly dependent on foreign suppliers. Invariably this means giving up often more attractive opportunities abroad.

A case in point is Aral which reported that it viewed marketing abroad only as a means of supporting domestic operations:

> We have to have some market penetration in the surrounding countries because otherwise we would lose some of our customers who travel a lot abroad. If Germans cannot find our products in their journeys in the neighboring countries they may well switch to competitors who are international in scope and who are present in Germany as well. It is hard to get these people back once they return to Germany. Therefore, we do invest in international marketing operations but on a relatively limited scale and not on the grounds of making a good investment in itself but as a means of strengthening our domestic operations.

Second, high technology firms—aerospace and computer firms in particular—have been the object of continued government attention for military, political, prestige, as well as economic reasons.[9] The government's objective is to encourage the creation of strong national industries, which hampers the creation of larger European undertakings that are transnational in nature—the only

[7]Andrew Shonfield, *Modern Capitalism* (London: Oxford University Press, 1965), p. 184.

[8]See Charles Albert Michalet, "France" in Raymond Vernon, ed., *Big Business and the State* (Cambridge: Harvard University Press, 1974).

[9]See Milton Hochmuth, "Aerospace," and Nicolas Jequier, "Computers," in Raymond Vernon, ed., *Big Business and the State* (Cambridge: Harvard University Press, 1974).

true hope for Europeans to develop a viable industry of their own:[10] "In fact, there probably is a basic conflict, if not total incompatibility between the support given by governments to their national champion and the often expressed need for a 'European strategy' based on mergers."[11]

Whereas practically every European country has certain depressed areas which it endeavors to develop, preference is given to labor-intensive sectors because the typical problem is under-employment. Particular targets are industries that can "secure a 'multiplier effect' on the activities of other firms and thus on the character of activity in the sector as a whole."[12] GCEs are under constant pressure to make a special contribution to such regionalization policies—a second inhibiting condition.

The typical case is Italy's South. In 1957 the government passed legislation requiring GCEs to locate in the Mezzogiorno 60 percent of the new plant investment and 40 percent of total investment over a 10-year period.[13] Subsequently, these requirements were raised. Today, GCEs must invest in the Mezzogiorno at least 80 percent of new plant investment and 60 percent of total investment. It is noteworthy that these are percentages of overall company investments—domestic and foreign combined. Some of these investments have not only created employment per se but engendered investments by others. As Wells found, Alfa Sud is an example: "The announcement of the project led Fiat to expand its investments in the South after it first opposed the government project. Pirelli followed Alfa and Fiat with the construction of a tire plant in the region."[14]

Other governments have similar aims.[15] The consequences of such policies are easy to understand: given that GCEs are under pressure to invest in certain areas of the country, they will invest less elsewhere and, least of all, abroad.

According to Vernon, "There has been a growing tendency to use national enterprises in the effort to solve specific problems as if they were agencies of the State."[16] As argued by Holland, given the concurrence of inflation and unemployment, conventional Keynesian economics have increasingly been questioned and governments have been inclined to act more directly than

[10]Renato Mazzolini, *European Transnational Concentrations* (London: McGraw-Hill, 1974).

[11]Nicolas Jequier, "Computers," in Raymond Vernon, ed., *Big Business and the State* (Cambridge: Harvard University Press, 1974), p. 240.

[12]Stuart Holland, *The State as Entrepreneur* (London: Weidenfeld and Nicolson, 1972), p. 26.

[13]"New plant investment" refers to investments in any new production unit while "total investment" includes also investments in existing facilities-for example, equipment in an existing plant.

[14]Louis Wells, "Automobiles," in Raymond Vernon, ed., *Big Business and the State* (Cambridge: Harvard University Press, 1974), p. 242.

[15]See Lloyd Musolf, *Mixed Enterprise* (Lexington, MA: Lexington Books, 1972); Jean-Pierre Anastassopoulos, "The Strategic Autonomy of Government-Controlled Enterprises Operating in a Competitive Economy," Ph.D. Diss., Columbia University, 1973.

[16]Raymond Vernon, *Big Business and the State* (Cambridge: Harvard University Press, 1974).

mere monetary and fiscal policies would allow. The consequence has been the emergence of industrial planning in several countries. To implement such plans new tools have become necessary. Thus, a third hindrance: GCEs have been prime candidates.[17]

Labor-intensive GCEs in particular report that in times of "stagnaflation" the government tends to pressure them to invest more than what is warranted by the level of demand. A company president commented: "The government 'encourages' private firms to do the same…But they are reluctant to go along with the government precisely because economic conditions don't justify increased investment. We have no choice." In fact, beyond making new investments of their own, GCEs have the unrewarding role of absorbing failing companies to preserve employment.

GCEs which have the task of sustaining the national economic activity cannot be expected to invest extensively abroad. Further, governments often see negative effects in foreign direct investments in general: production abroad is seen as taking the place of exports in foreign markets and therefore as having negative balance of payments effects. Further "since there is a strong relationship between trade and employment, it might be expected that if a foreign investment had a negative impact on the [home country's] balance of payments because of lost…exports, then…employment would be reduced."[18]

Countries with balance of payments and employment problems have therefore adopted measures—such as, export credits or fiscal advantages—to spur exports and limit foreign direct investment. Yet, such measures are only partially effective: private firms which see a real advantage in going abroad do so anyway. This puts a particular burden on GCEs. On the one hand the government doesn't want GCEs to add to its problems and thus exerts pressure on them not to go abroad as an end in itself; on the other, it wants GCEs to serve as an example and thus is especially concerned that they abide by its policy.

Pressures to Go Abroad

Sectorial policies also call for international expansion. When a country has no natural resources of its own in a vital sector, the government exerts pressure on the relevant GCEs to become directly involved in the extraction abroad of these resources.

In this case, two basic routes are available to secure raw materials. The first is to buy them from third parties on international markets. The second is to become directly involved in the exploration and production of raw materials. GCEs are under pressure to go the second route. Private firms of course can also follow this route but the point is that they do so only when they find it efficient from a microeconomic viewpoint. Governments, on the other hand, have macroeconomic and political motives in mind and cause GCEs to go this route even when it is not

[17]Stuart Holland, *The State as Entrepreneur* (London: Weidenfeld and Nicolson, 1972).

[18]Robert Stobaugh, *U.S. Multinational Enterprises and the U.S. Economy* (Boston: Graduate School of Business, Harvard University, 1972), p. 1.

justified from a company viewpoint. This strategy was explained by a government official: "Direct involvement in extraction activities enhances national independence. Of course you are still dependent on the will of foreign States; but at least you have some control over the actual extraction process, especially in terms of the control of the know-how required by this process…. This is important from a political and national security standpoint." A chief executive said:

> If GCEs didn't have the aim of being present as much as possible in all the phases of the production cycle, they would most probably invest less in foreign activities and rely more on foreign producers for their raw materials supply. In many cases this would be more efficient from the company's own economic standpoint. The real value of direct access to sources of raw materials is to the country. From the micro standpoint, the risks you eliminate are really not major ones relative to the importance of the investments required. But from the country's standpoint the value of reducing such risks is much greater and does justify the investments.

In this connection, an executive of the privately owned Petrofina posed an interesting issue:

> From our point of view, GCEs' behaviour is hard to predict because they obviously don't always operate according to economic criteria, particularly when upstream operations are involved. For example ENI invests in certain African countries when everybody else is thinking of getting out because of political risks—particularly nationalizations. They seem to have a propensity to take risks which are unjustified by the expected returns.

This question was subsequently taken up with GCEs and ENI in particular. The explanation is clear:

> GCEs don't always operate according to microeconomic criteria [said one interviewee]. In the case of investments in upstream operations the expected returns are not just in terms of corporate financial results. The emphasis is much more on increasing the national autonomy…What such investments do for the country is much more than what they do for the company; and the risks involved are well worth taking from the national viewpoint.

There are several instances in which a government wishes that certain investments be made in foreign countries. Thus, when a government tries to develop its political ties with a given country it can ask GCEs to become involved there—for example, Renault's investment in manufacturing facilities in Canada in the 60s.[19]

Economic considerations are important too. Thus, especially since the 1973 oil crisis, governments have found it increasingly desirable to pay the more than quadrupled oil bill with other means than hard currency—industrial investments in particular. They have therefore asked their companies to proceed with such investments, thus pursuing what an Italian interviewee called a "conglomerate strategy of GCEs": GCEs belong to the same owner—the State—whose benefits they must maximize. From the State's viewpoint, the performance of the public

[19]See Jean-Pierre Anastassopoulos, "The Strategic Autonomy of Government-controlled Enterprises Operating in a Competitive Economy," Ph.D. Diss., Graduate School of Business, Columbia University, 1973.

sector in general, and not solely in financial terms, is more important than the performance of the individual GCEs.

Therefore, coordination among GCEs is warranted not just in view of economic results but also in terms of sociopolitical benefits. Because most European states have oil GCEs of their own, there is an opportunity to coordinate the "give and take"—the needs of the oil companies and the offerings of the other GCEs—with oil-exporting countries.

Pressures for Particular Patterns of International Behavior

GCEs have to stick especially closely to general rules of conduct advocated by the government; thus, GCEs are expected not to speculate against their home country's currency.

A government can also ask GCEs to take special steps in the context of its economic policy; thus, it may pressure GCEs to raise at least some of their debt capital abroad, and so reduce the need to export capital for foreign investments—and if done for domestic uses, it actually brings currency to the country.

A French study substantiates this[20] by analyzing the evolution of the foreign debt issues of major GCEs over 12 years. It shows that "while the foreign debt issues are practically negligible until 1967, they begin to become important starting in 1969. From 1969 to 1973 they represent 17 percent of the total long-term debt issues of these firms and in 1974 they represent about 75 percent."[21] It is noteworthy that 1974 is a year in which France witnessed a particularly serious balance of payments deficit. The study concludes: "This situation is imposed by the Finance Ministry: it corresponds both to a wish to preserve French savings for [private firms] and to impose on the public sector the chore of 'defending the franc', which means in today's situation, to find foreign currency."[22]

Conclusion

Restraining forces for foreign expansion tend to be greater than the driving forces. Pressures hindering international growth are more numerous than those calling for such growth, and they tend to represent issues of greater concern to the government. Restraining forces tend to derive from ongoing government policies (regional development ends), while the driving forces generally stem from passing concerns (the pressures to invest in a particular country for foreign policy ends are usually relatively temporary in nature).

Yet, the analysis is puzzling on several accounts. We observed several instances in which GCEs' actual behavior departs from what would seem rational behavior:

[20]"L'internationalization des Entreprises Publiques," *Economie et Politique* (*Revue Marxiste d'Economie*), October 1975, pp. 105–118.

[21]Ibid., p. 116.

[22]Ibid.

- Lack of coherence between various GCEs' strategies and failure to coordinate GCEs' behavior effectively. GCEs seem to take considerable liberties with government efforts to harmonize the actions of the public sectors; thus, many GCEs don't comply with pressures to invest in certain countries-say, oil-exploiting nations.
- Breaches in sectorial policies. We found a variety of instances of inconsistencies in the application of government plans in certain industries. High technology sectors are a case in point; for example: how can one explain governments' initial reluctance to allow GCEs to enter joint ventures with European partners on the grounds of preserving national autonomy and subsequent permission to pool resources with American companies?[23]
- Several "imperfections" were noted in the way GCEs implement government policies; they often make awkward capital-intensive investments in depressed areas, instead of badly needed labor-intensive investments.[24] This analysis offers no satisfactory explanation for the phenomenon.
- There is evidence that GCEs don't comply either with the letter or with the spirit of government policies; thus, several GCEs have been caught speculating against their national currency.[25]

How can such inconsistencies be explained? Given the unitary character of the government and GCEs, how can there be a lack of coordination? Why forbid a company to pursue a European strategy while at the same time claiming such a route is encouraged, and then allow a link-up with a non-European partner? And isn't breaking government rules in one's modus operandi a self-defeating activity…?

An Organizational Process Perspective

The Theory

The traditional view of the firm as a rational, monolithic and value-maximizing entity has come under severe attack.[26] Here it should suffice to point out that the two fundamental assumptions on which the traditional approach rests are

[23]A case in point is the French government's reluctance to permit C11 to go too far in the UNIDATA union while suddenly allowing it in 1976 to merge with Honeywell-Ball.

[24]See Stuart Holland, *The State as Entrepreneur* (London: Weidenfeld and Nicolson, 1972), pp. 110–112.

[25]A case in point is Renault's Swiss financing subsidiary-Renault Finance.

[26]See Herbert Simon, *Administrative Behavior* (New York: MacMillan, 1975); James March and Herbert Simon, *Organizations* (New York: Wiley, 1958); Richard Cyert and James March, *A Behavioral Theory of the Firm* (Englewood Cliffs, NJ: Prentice Hall, 1963); William Guth, "Toward a social system theory of corporate strategy," *The Journal of Business,* July 1976; Henry Mintzberg, "Policy as a field of management theory," *The Academy of Management Review,* January 1977; Henry Mintzberg, Duru Raisinghani, and Andre Theoret, "The Structure of 'unstructured' decision processes," *Administrative Science Quarterly,* June 1976.

fallacious. First, neither people nor organizations really behave rationally. Decisions are, in fact, made under conditions of "bounded rationality." And people don't maximize but "satisfice."[27] Second, organizations are not monoliths, but aggregations of suborganizations more or less tightly knit together by agreed upon procedures. To ensure an acceptable level of coordination, standardized processes are developed. But these processes are really a two-edged sword: on one hand, they allow a certain—though limited—coherence within the organization, but on the other, they constrain the range of possible actions available to the organization; because the organization is dependent on them for its functioning, what it can do is really limited by the scope of the existing organizational processes. The traditional perspective says little about this.

To understand corporate behavior one must understand the relevant organizational processes. Whereas the traditional perspective invokes postulated objectives to account for companies' actions, here the focus is on standard operating procedures and routines which vitally condition what a company does and doesn't do.

According to Simon's model: "The best explanation of an organization's behavior at t is $t - 1$; the best prediction of what will happen at $t + 1$ is t. [The process view's] explanatory power is achieved by uncovering the organizational routines and repertoires that produced the outputs that comprise the [firm's behavior under consideration]."[28] If an organization takes a certain action today, its component units must have taken in the past, in comparable circumstances, an action only slightly different from today's action. Thus, to understand what will trigger strategic search, one has to look at what information organizational routines are designed to collect and process. To understand what alternatives will be considered in given circumstances, one has to look at what past circumstances are closest to the present ones and what was done then, and so on. Similarly, to predict a firm's behavior in a given situation, one has to look at past behavior in a similar situation.

Yet, companies do occasionally pursue novel courses of action. For a new kind of problem or opportunity to be identified and for a new kind of strategic alternative to be considered and pursued, an initiating force (a high-ranking executive) must actively intervene in the decision process. Therefore, one must uncover which forces may influence an organization to look at new types of strategies; and one must analyze which issues various key forces are likely to be sensitive to and which courses of action they are likely to promote. Yet, one must not lose sight of the fact that, while forces can indeed provide the impetus for new problems or opportunities and courses of action to be considered, their influence beyond that is conditioned by existing processes; once a force has introduced a new idea, standard procedures take over and the force can have but limited impact on what happens next.

[27]Herbert Simon, *Administrative Behavior* (New York: MacMillan, 1975).

[28]Herbert Simon, *Models of Men* (New York: Wiley, 1957); Graham Allison, *Essence of Decision* (Boston: Little, Brown, 1971), p. 88.

This perspective conceives of organizations as having an inherent tendency toward perpetuating the status quo; therefore, a key distinction is made between actions familiar to the organization and actions which are new to it. Accordingly we must distinguish between GCEs making their first steps in the international scene and GCEs with extensive experience abroad.

GCEs' Actual Behavior

First Decisions to Go Abroad

In companies with no foreign operations, procedures tend not to be geared toward expansion abroad.[29] This is true in all companies; yet, it is especially a problem in GCEs.

Identification of Opportunities Abroad

Organizational routines are heavily influenced by past experience. They scan the environment for familiar types of problems; therefore, if an enterprise has never had foreign activities, it rarely has sensors to detect opportunities abroad.[30] Consequently an initiating force must intervene—say, a top corporate executive or a division head. Still, to step in, such individuals must be motivated to fight for a foreign venture, though the structure in which they operate is not conducive to their being aggressive on this front.

Politicians are primarily concerned with domestic issues; this by necessity influences GCEs' managers. Managers are appointed by the government and are accountable to it, so their own attitude reflects at least partially the idiosyncrasies of in-government actors. Given politicians' own interest in national undertakings, managers themselves tend to give precedence to domestic kinds of concerns. A German interviewee noted: "The rewards in such companies are really not so much in contributing to corporate growth, especially growth beyond national frontiers. They are much more in terms of contributing to issues of collective concern and political kinds of questions. There is little here which might lead to ideas of foreign expansion."

Ina variety of instances in different countries and different sectors, management had become sensitive to politicians' motives. In such cases, management had changed its position not because it objectively saw sound reasons to do so from a macro- or microeconomic standpoint, but because of pressures by government actors geared to purely political concerns.

Moreover, opportunities can be identified at the government level. Here parochialisms are inevitable: routines for the detection of business opportunities exist in only certain state organizations and are geared to only those areas which lie close

[29]See Yair Aharoni, *The Foreign Investment Decision Process* (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1966).
[30]Ibid.

to the organizations' own goals. Thus, but a finite range of options is considered: GCEs are significantly influenced by the government to pursue foreign expansion according to paths which reflect a limited set of political ends.

To illustrate, a major French GCE reported that it first went international for foreign policy reasons: "Our country had poor relations with [the host country] and France had no embassy there. So we were encouraged to invest there because this was an opportunity to establish semi-official, yet unobtrusive ties with [the foreign country], which might be useful to develop new relations with local authorities." This possibility was first imagined by the Ministry of Foreign Affairs, which then exerted influence on the company via the Prime Minister himself.

Planning Action

As in private companies, plans for early foreign investment strongly reflect planning patterns of domestic projects,[31] so errors and misevaluations are inevitable. Certain aspects are distinctive of GCEs: variables which are important in these companies' domestic operations are emphasized in international ventures where their importance is negligible. In their early expansion abroad, GCEs have experiences such as the following, reported by an Italian manager:

> At home we have grown into the habit of autodisciplining our actions in a way to take the collective interest into account. When we first went abroad we instinctively did the same. But we then came to realize that we were in fact exporting our values—we were making choices in the name of the collective good using parameters which were quite subjective and not necessarily tailored to the local society. For example, in one case where we were building a major new plant, we were in addition building houses for our future workers and we were also getting involved in projects such as the construction of a school and a supermarket. This seemed natural to us given the area was relatively depressed and no suitable facilities appeared to be available. But this turned out to be for the most part a superfluous effort: people didn't like the houses and felt even hurt in their pride that we got involved in building a school for them-they felt they shouldn't need us for that. Our planners simply started out with the wrong assumptions.

Approval

A decision must be approved by formal review procedures. When a new type of action such as the first foreign investment is considered, there are no procedures tailored to appraise it; existing procedures must come into play, resulting in considerable delays because routines are ill fit to take action on such unfamiliar types of proposals. This is particularly significant at the government level.

Government units having a formal role in the approval process differ from country to country and from company to company. At one end, a GCE belonging to a State holding company may be able to invest abroad without needing to formally consult with the government, approval from the parent being sufficient.

[31] Ibid.

At the other end, certain GCEs need not only a formal approval by government (the sponsoring ministry) but also by Parliament: many GCEs have their field of activity precisely defined and need a formal permission from Parliament to depart from it.

For their first foreign investment, most GCEs have to secure approval from various government units. To illustrate—albeit simplifying—consider the typical Italian GCE belonging to IRI. Plans of the company are integrated in the overall plan of the "Finanziaria di settore" (the intermediary sectorial holdings such as Finsider or Finmeccanica) which is itself integrated in an overall IRI plan. This plan is then submitted to the "Ministero delle Partecipazioni Statali." The ministry in turn presents a report to Parliament. In addition, certain special organizations get involved—for example, regional development agencies, interministerial committees for price controls, and industrial planning departments.

A proposed change in a GCE's strategic posture toward international expansion may not receive appropriate analysis from a reviewing unit either because the contemplated change raises questions that existing procedures are not fit to address or simply because the unit does not feel concerned by the change. We found several instances of proposals which either never were acted upon at the government level or were approved well beyond the point where they constituted attractive propositions for the firm. Indeed where a proposal is acted upon positively, delays are often considerable. In our sample one could estimate that the period which elapsed between the formulation of a plan by the relevant business unit and final approval varied between 18 and 34 months. This lag often means that the opportunity to be exploited has gone. For example, one company reported it had identified an attractive opportunity for take-over of a firm in Latin America. By the time it got approval to go ahead with the venture, somebody else had acquired the firm.

Action

Rarely is a project implemented as planned. Risks of distortions are particularly serious when a new kind of activity is involved. Further, a project of strategic importance tends to involve many parts of the organization, all having a substantial degree of independence vis a vis each other. This means risks of distortions are even higher. In GCEs the problem is compounded by the additional involvement of government units. Specifically, distortions were found in two main areas.

First, actions were not appropriate to a particular plan. Because those who plan are rarely those who act in the field, their actual moves are ill-fitted to the overall strategy. A typical case is that of a government unit calling for a GCE to make a particular investment abroad. Normally, the government specifies the broad lines of the project, leaving the company on its own in carrying out the plan in practice. If this is an early foreign investment for the company, inefficiencies are inevitable: All sources of financing were typically not investigated (in one instance a company was importing most of the capital required while its finance staff hadn't investigated the possibility of tapping cheaper local funds); local sources of supply were not being studied thoroughly and the location of the plant was chosen hastily (in one case a company put up a plant abroad next to the sea because this was what it

had successfully done over the years at home, while locally the obvious location was inland, next to the capital which was the main industrial center of the country).

Second, there was a lack of action. Certain decisions were simply ignored altogether. The following example reported by a government official is typical:

> After the outbreak of the oil crisis, the government decided that it would be desirable for various GCEs to coordinate their actions and thus present a common integrated front to the OPEC countries: offer to pay part of the bill of the oil-seeking GCEs with industrial investments by other GCEs. So we devised plans towards this end. Yet, once the plans were completed, not much happened. The oil companies continued to "go it alone" and the few projects of GCEs in OPEC countries which came off the ground were the product of individual companies. What happened? Once plans had been made, nobody took the responsibility of following through. Top managers who had participated in the development of the plan indeed asked their staff people and sometimes their division heads to devise means to coordinate their company's doings with those of other GCEs. But taken in the bustle of other concerns, they didn't devote much further attention to the matter. The subordinates didn't do much for coordination either: from their vantage point, they didn't perceive the importance of coordination and couldn't quite see what to do with the whole concept. And you might ask, how about the government? Well, it was overthrown and replaced by a new government who didn't find the issue one worth worrying about.

Multinational GCEs

It is only with experience in international operations and repeated foreign investment decisions that such inefficiencies are tempered. Procedures are developed to scan the international environment more systematically; search for specific action alternatives becomes more objective and fit to the particular conditions found abroad; reviewing units learn how to appraise a foreign proposal more effectively; and the routines by which plans are implemented are more efficient. As with private MNCs, when a GCE successfully acquires experience in the international field it develops mechanisms to cope with such activities on an ongoing basis.[32] Such mechanisms are gradually grouped in a standardized pattern. A case in point is the creation of an international division whose purpose is to coordinate and monitor the company's international activities and the environment in which they take place.

Thus, we found that opportunities are sought on a regular basis. Decisions to invest abroad do not any more hinge upon intervening forces. The more specific planning phase is also smoother. Overtime, the company has developed special routines to formulate an international action plan as such. There is a systematic pattern to gather and evaluate data relevant for international projects. Approval is also swifter. With experience, a company adapts its structure and routines to the appraisal of international projects. Besides, the new structure tends to cause less organizational units to become involved that are unfit to take action on international proposals. Things are also easier at the government level. For GCEs with existing foreign activities, another foreign project does not constitute an abnormal

[32] Ibid., Chapter 7.

proposal; thus, less formal authorizations are required. Further, there tends to be less inertia on the part of reviewing units: the units concerned have themselves learned to deal with foreign investment proposals. We found that in 20 foreign investment decisions in multinational GCEs, 43 percent of the proposals were approved with no government involvement at all. In the other instances, delays due to government consultation were one to five months long.

Finally, distortions between plans and actions are reduced. Foul-ups are less numerous and decisions are accomplished via patterns of behavior well adapted to foreign undertakings.

Policy Decisions

In their early international activities, GCEs' foreign operations exhibit similarities to their domestic operations that are striking. Foreign subsidiaries tend to adopt policies borrowed from national activities; thus, a subsidiary tends to be sensitive to issues the parent company is sensitive to at home. The best examples are in labor policies. Several GCEs were found to over-hire in their early foreign investments: given their policy of contributing to the solution of domestic employment problems, the companies are frequently overly liberal in their hiring practices abroad. Similarly, given that at home GCEs are at the forefront of labor policies, their foreign subsidiaries tend to show similar concerns—such as, giving workers abroad the same social benefits as at home in the absence of any local requirement to do so.

Firms change adaptively as a result of experience. Over time foreign subsidiaries develop policies of their own, more suited to local conditions. Similarly, early on in their international operations GCEs rarely transgress government policies, say in terms of currency speculation. They do so less because of an explicit choice, but because they don't know better. In their early international operations GCEs don't master the techniques required for the exploitation of the opportunities offered by currency transactions. Yet, with time, they both become sensitive to the potential advantages of such practices and develop the necessary know-how to exploit them.[33]

Conclusion

It is in their early steps in the international arena that GCEs exhibit their greatest distinctiveness vis-a-vis private companies. The greater degree of bureaucratization stemming from the government dimension increases the tendency on one hand to stay home and on the other to go abroad—when this occurs—in an awkward fashion. Moreover, in GCEs with established extensive international operations, new international strategic decisions are taken more swiftly and effectively.

This analysis answers questions raised by the traditional perspective. Thus, certain inconsistencies in GCEs' actions are clarified. Particularly for model

[33]French National Assembly, Finance Committee, "Le contrôle des Entreprises publiques," June 1972.

kinds of actions it is difficult to achieve much harmony between different organizations. This accounts, for instance, for failures to effectively coordinate the behavior of various GCEs, and further, enables us to understand why certain policies are not implemented coherently: given the independent nature of various organizations, they tend to strive for the achievement of their own goals to the detriment of collective ends which government policies should reflect. Also, it becomes clear why certain GCEs don't engage in practices such as currency speculations while others do: with experience, organizational units responsible for international operations acquire a substantial degree of independence of their own and are able to develop SOPs tailored to the international environment.

Summary

State ownership reduces the chance that a company will expand abroad. Government policies for the most part tend to encourage domestic growth. While the type of bureaucratic constraints is comparable to that found in private firms, state ownership compounds the problem. Especially for the first international steps to be taken, a strong initiating force is necessary; yet, the bureaucratic setting as well as leaders' emphasis on domestic concerns constrain the impact such forces have on GCEs' international strategy decisions.

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Part II
New Insights on a Renewed Phenomenon

Exploring the Role of Government Involvement in Outward FDI from Emerging Economies

Chengqi Wang, Junjie Hong, Mario Kafouros and Mike Wright

Introduction

In contrast to the theoretical prediction that emerging-market enterprises (EMEs) do not possess strong capabilities, and will therefore remain the world's production workshop, EMEs increasingly internationalize operations through foreign investment (Bhaumik, Driffield, & Pal, 2010; Luo & Tung, 2007). Although this phenomenon has important economic implications, and opens up new avenues for academic theorizing, knowledge of the business models and forces driving outward foreign direct investment (OFDI) from emerging economies and how these differ from internationalization by developed nations remains incomplete (Child & Rodrigues, 2005; Ramamurti, 2012). This study addresses this lack of understanding, and extends previous research in two important ways.

First, the resource-based view (RBV) offers valuable insights into how variations in assets influence OFDI. However, it overlooks how an important

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institutional force – the home-country government – interferes with the use of firm resources and impacts internationalization behavior. Studies have suggested that governments are behind the internationalization of EMEs (Luo, Xue, & Han, 2010; Peng, Wang, & Jiang, 2008), but prior research has under-theorized the role of different types of government involvement, and has neglected the fact that such involvement may take different forms. We also have limited understanding of variations in the organization of governments, and the differential effects that various levels of government (e.g., state-, provincial-, and city-level) have on OFDI (Ring, Bigley, D'Aunno, & Khanna, 2005). As a result, studies that focus on the state as a whole do not sufficiently consider the context within which internationalization decisions are taken, the often conflicting objectives of different government levels, and how these enhance or constrain EME internationalization.

Our first contribution therefore lies in demonstrating how different government levels and types of involvement can, through the generation of institutional pressures, influence firms' decisions to invest abroad. We look beyond the surface of "government" (Ring et al., 2005) to consider how affiliation at different levels influences both the *willingness* and the *ability* of EMEs to internationalize. Recognizing that firms need to secure not only competitiveness, by being different from their rivals, but also legitimacy, by being similar to them (Jensen, 2003), we examine isomorphic processes of internationalization. We demonstrate that non-market mechanisms manifesting themselves through government involvement have a profound impact on the international trajectories of EMEs. As different levels of governments have different objectives, they exert different institutional pressures on EMEs and thus impact internationalization differently. We further show that variations in government involvement influence not only the willingness and ability of EMEs to invest abroad but also location choices (developed vs. developing countries) and type of overseas investment (resource-vs. market-seeking). Since institutional sources of firm heterogeneity are proposed as antecedents of OFDI, our approach complements and extends conceptualizations that view OFDI simply as the result of superior resources, and enables us to examine not only *whether* governments matter for internationalization but also *how* they matter.

The second area where we contribute concerns how government ties, an integral part of the business model adopted by EMEs, substitute for weak institutional arrangements in developing economies (Khanna, Palepu, & Sinha, 2005) and thus facilitate international expansion. In these environments, EMEs need to adapt and complement relationship-based strategies with new resources and capabilities. Despite the centrality of this concept in explaining variations in OFDI, little research has examined the role of government, firm resources and capabilities simultaneously. We address this gap by developing and testing a contingency perspective combining insights from resource-based and institutional lenses. This integrative framework recognizes that not all types of government involvement are equally beneficial to all EMEs, and not all firms possess similar ability to internalize such advantages and respond to institutional pressures for internationalization.

Emerging-market governments provide valuable inputs to support their firms' internationalization, and EMEs in turn incorporate such inputs in their governance

structure by turning government officials into their agents (Boddewyn & Brewer, 1994). However, as not all firms can exploit these benefits or respond to isomorphic pressures, we expect the role of government in increasing internationalization to vary considerably among EMEs with different capabilities and resources. Consistent with this premise, we show that EMEs with strong resources respond very differently to coercive, normative and mimetic pressures for internationalization generated by different types of government involvement. Our framework, which is tested against a novel firm-level dataset of Chinese companies, enables us to document how different types of government involvement interact with firm resources and capabilities to drive OFDI from emerging markets, to demonstrate that resource-based and institutional influences coexist and are highly interdependent, and to provide evidence on the relative power of these factors in explaining internationalization outcomes.

THEORETICAL FOUNDATION

Antecedents of Internationalization: Resource-based and Institutional Views

The RBV suggests that variation in internationalization is a function of interfirm resource heterogeneity. Intangible assets, such as technological and marketing resources, help EMEs enter international markets, as they involve higher levels of specificity, making imitation difficult (Dierickx & Cool, 1989). R&D, for instance, enables firms to develop innovative technologies to differentiate themselves from international rivals (Kafouros & Buckley, 2008), while marketing resources encourage internationalization by enabling firms to differentiate their products and create barriers to entry (Kotabe, Srinivasan, & Aulakh, 2002). A key assumption of RBV is that although managerial decisions are constrained by information asymmetry and causal ambiguity, they are driven by motives of efficiency and competitiveness (Capron & Chatain, 2008).

By contrast, institutional theory suggests that firms are affected by institutions – defined as regulative, normative, and cognitive structures and activities (Scott, 1995). Organizational actions are guided by socially constructed beliefs and processes. As such, determinants of OFDI extend beyond economic optimization and strategic justification to forces shaped by political, legal and social rules, and by the broader political context surrounding the decision to internationalize (Oliver, 1997; Peng et al., 2008). Three types of institutional isomorphism shape firm behavior (DiMaggio & Powell, 1983):

(1) coercive isomorphism – where organizational decisions are guided by the orientation of the state, powerful regulators, and political pressures supporting a given set of practices;
(2) normative isomorphism – where firm actions are the result of pressures exerted by professionalization and established norms; and
(3) mimetic isomorphism – where firms imitate practices of successful peers.

Hence, while the RBV suggests that the internationalization decision is economically justified, and depends on idiosyncratic resources, institutional theory argues that such decisions are the outcome of isomorphic pressures and political influences.

The Need for an Integrative Approach

We combine resource-based and institutional views, focusing on integrative mechanisms that remain largely unknown but are particularly suitable for explaining the strategic behavior of EMEs (Peng, 2003). An integrative perspective enhances understanding of international expansion by EMEs for two key reasons. First, although resource-based and institutional views have each in their own way contributed to the advancement of internationalization theory (Meyer, Wright, & Pruthi, 2009), each perspective provides only a partial account of international expansion. The two theoretical lenses are concerned with similar phenomena, but their underlying assumptions and boundary conditions are different. For example, although institutional pressures may influence managers' willingness to internationalize, they may not be able to do so without the necessary resources. Similarly, the RBV does not explicitly address how firms balance competitive and institutional pressures, or why managers may make decisions that are not economically optimal. Differences in OFDI not resulting from variations in resources are particularly intriguing, because they cannot be explained by RBV reasoning. Thus the two theoretical lenses are complementary – even though the forces associated with each are often competing.

Second, and more importantly, the two perspectives are interdependent; institutional forces interact with and influence resource-based constructs, and vice versa. For instance, institutional factors may enrich or complement the firm's assets, and in turn superior resources may enable firms to exploit institutional advantages more effectively or establish a degree of independence from institutional demands. Similarly, a firm's choices are influenced by how the regulatory context affects access to valuable resources, and impacts the firm's ability and willingness to invest abroad. Combining the two lenses is valuable, particularly in an emerging-market context, where firms' strategic choices are affected by the hybrid state of "neither market nor hierarchy" (Powell, 1990). Although we do not necessarily suggest that the two theories should always be placed on an equal footing, our framework demonstrates how institutional reasoning enriches conventional explanations of internationalization.

Conceptual Framework and Hypotheses Development

State Ownership and Government Affiliation Level

Institutional systems are not unified or coherent (Scott, 1995). The type and magnitude of institutional pressures for internationalization may vary significantly across EMEs, depending on government involvement. We posit that government exerts informal influence or formal authority over the way in which EMEs allocate

resources and internationalize, and further propose that such involvement and pressures depend on two distinct firm-level dimensions: the *degree of state ownership* in a given firm, and the level at which the firm is affiliated to government (*government affiliation level*). The first construct refers to cases where government influences internationalization behavior by owning (wholly or partly) the organization. EMEs typically lack effective market-based governance mechanisms associated with internal (e.g., board of directors and supervisory board) and external mechanisms (e.g., outsider participation). As a result, although direct state influence can theoretically take different forms, government controls state-owned enterprises (SOEs) mainly through ownership arrangements. The second construct (government affiliation level) refers to situations where government affects the international trajectory of EMEs by establishing relationships with companies (Wank, 1995). The institutional embeddedness of EMEs varies with the hierarchical ranks of the governments with which they are politically connected. For instance, while some EMEs in China are closely affiliated to higher-level government (e.g., state or provincial level), the level of government affiliation for other firms is lower (e.g., city or county level).

Consideration of the degree and level of government involvement is insightful for several reasons. First, both state ownership and hierarchical differentiation of government suit the interests of the ruling elite in emerging economies (Goldeng, Grünfeld, & Benito, 2008). Since strategic choices of EMEs are shaped within a network of interlocking relationships comprising various administrative levels and regulatory bodies (Child & Lu, 1996), consideration of different government levels helps us understand EMEs' internationalization behavior. Second, while industry and macro-level institutional forces affect all firms in a given business sector, both the degree of state ownership and the government affiliation level are idiosyncratic to the firm. The two constructs are conceptually different, and impact the decision-making of EMEs differently. As a shareholder in SOEs, government influences various decisions, including that to internationalize, more directly.

In contrast, the impact of government affiliation on firms is indirect through networks. It reflects the manner in which government and firms interact within a system in which legitimacy is derived from relationships, rather than formalized ownership arrangements (Boisot & Child, 1996). Empirically, these two constructs are not correlated with one another, and capture distinct phenomena: that is, a firm wholly owned by the state may be affiliated to a lower government level, while a private firm (or a firm with a low degree of state ownership) may be affiliated to a higher government level (Du & Girma, 2010). This enables the firm to navigate discriminatory nonmarket environments, become less vulnerable to social hostility and managerial malfeasance (Nee, 1992), and cope with vague and contradictory rules.

The distinction between the degree and level of involvement is also important because different government levels have different motives and objectives (Bai, Lu, & Tao, 2006). Therefore, firms affiliated with different government levels with distinct preferences face distinct institutional pressures, which in turn may lead to different internationalization outcomes. Equally, as a firm's network is composed

of different types of relationships (Lin, 2001), it can facilitate different advantages, create various pressures and impact internationalization behavior differently. These political advantages can be internalized either by developing ties with various government levels or by extending organizational boundaries to incorporate political actors in the firm's internal hierarchy (Boddewyn & Brewer, 1994).

Building on this premise, we argue that government involvement influences both the *ability* and *willingness* of EMEs to internationalize. It may affect international expansion of EMEs by influencing:

(1) Their strategic objectives and decisions;
(2) The availability and cost of various resources;
(3) The way in which these resources are used;
(4) Their capabilities;
(5) The provision of valuable knowledge, information and intermediary services; and
(6) Transaction costs associated with cross-border expansion.

As EMEs and governments are diverse, it is imperative to use a contingency approach to capture such heterogeneity and recognize that not all types of government involvement are equally beneficial to all firms (Peng & Luo, 2000). Accordingly, we expect the marginal effects of government involvement on international expansion to depend upon EMEs' own capabilities and resources (Fig. 1). We also suggest that government involvement has a differential effect on both the level of OFDI, and its location and type. The choice to focus on these interactions is consistent with our objective to examine how constructs from different theoretical lenses interact with one another to shape international expansion. The next sections develop our hypotheses.

Government Involvement, Institutional Pressures and OFDI

Variations in government involvement (Fig. 2) may generate coercive, normative and mimetic pressures within the firm, influence resource use, and impact EME willingness and ability to invest overseas (Peng et al., 2008). When the degree of state ownership within an EME is higher (i.e., Cells 2 and 4 in Fig. 2), governments influence firm decisions by appointing executives, and by introducing regulations regarding state-owned assets. Firms with a higher degree of state ownership need to balance political acceptability and market requirements, and ensure that decision-making is aligned with the objectives of the state, including globalization. Although isomorphic mechanisms are often empirically indistinguishable (DiMaggio & Powell, 1983), government involvement through ownership likely affects resource use and willingness to internationalize by generating normative and mimetic pressures.

Normative expectations influencing the willingness of SOE managers to internationalize arise from professionalization and their career aspirations. The career and rewards of SOE managers depend largely on whether they succeed in fulfilling government goals. Hence the internationalization decision is driven partly by the

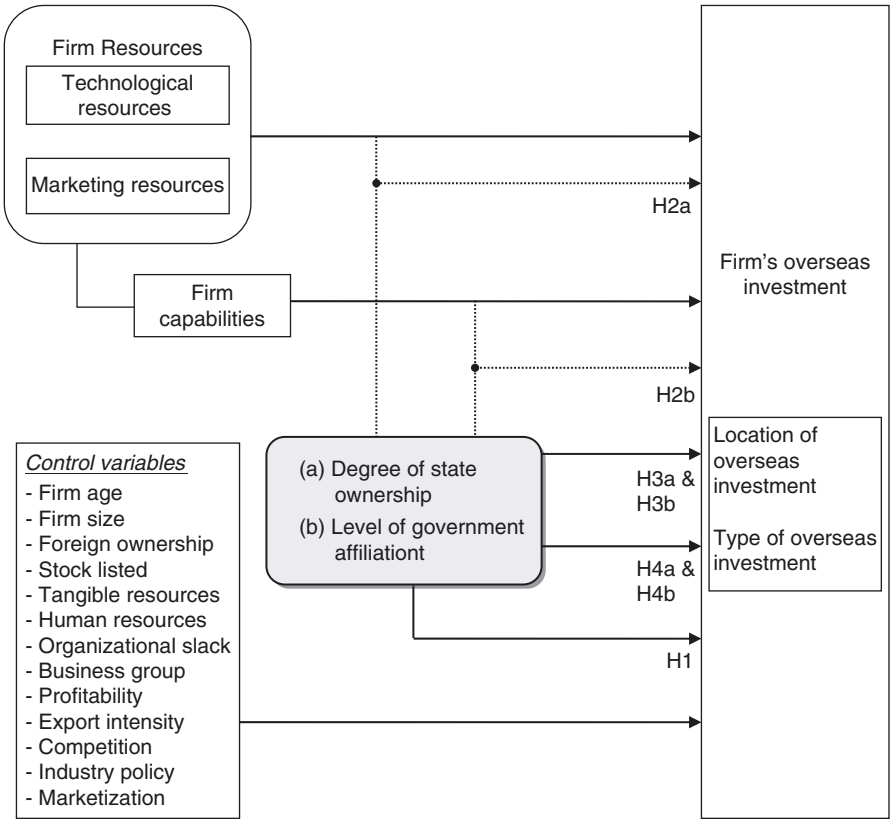

Fig. 1 Research model

need to accommodate political objectives (Ramamurti, 2001), integrate the country into the global economy and "show the national flag". Given these strong pressures, they are less concerned with economic optimization of resources. The willingness of SOEs to internationalize is also shaped by mimetic pressures. Emerging-market SOEs that expand abroad are viewed as successful, designated as "national champions" and receive government support (Deng, 2009). These mimetic forces influence senior managers of SOEs to imitate successful peers and mobilize resources to implement internationalization plans. SOEs are likely more sensitive to such isomorphic pressures because they can afford to partly sacrifice organizational performance for public policy goals. By contrast, since EMEs with a lower degree of state ownership depend less on governments as resource providers, normative and mimetic pressures likely play a less crucial role in affecting managers' willingness to expand abroad.

While prior studies have investigated the relationship between state ownership and OFDI (e.g., Cui & Jiang, 2012; Duanmu, 2012), little research has explicitly considered how government officials affect internationalization

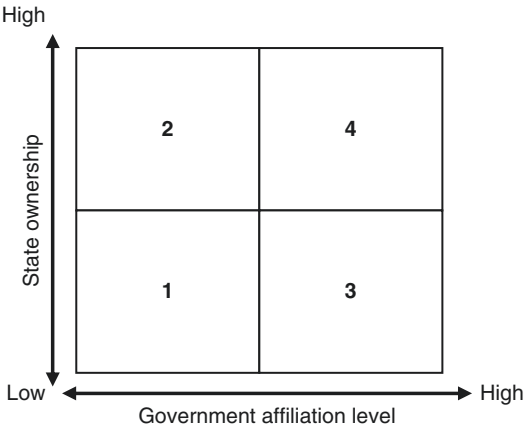

Fig. 2 State ownership and government affiliation level

decisions by establishing close relationships with managers (Wank, 1995). Government affiliation can change firm behavior through specific institutional arrangements, such as joint business–government committees, and other relational frameworks that connect managers and government agents in a common discourse (Child & Tsai, 2005). These relationships and ties are particularly effective in conveying government expectations about particular corporate decisions and practices (Gould, 1993). As they provide governments with channels into the decision-making process, they shape how EMEs evolve and make choices, influence their objectives, culture and decisions, and lead to different internationalization responses (Peng et al., 2008).

A firm's strategic options also depend on factor availability in home-country environments (Castrogiovanni, 1991). In less munificent environments, the state is more active. Firms have to establish close ties with governments to enjoy state favors, access new resources and compensate for the lack of factors. Government affiliation helps EMEs overcome constraints relating to use of existing resources through favorable treatment that circumvents institutional voids (Lu & Ma, 2008). As discussed earlier however, the level of government affiliation (Fig. 2) can be either higher (e.g., state or provincial) or lower (e.g., city or county). Higher levels of government affiliation reflect greater status that reinforces the trustworthiness of a focal firm and reduces the uncertainty that potential foreign customers and partners might feel about the firm (Jensen, 2003). Hence the advantages arising from a firm's ties in its home country affect its propensity to pursue foreign opportunities (Guler & Guillén, 2010).

Moreover, different government levels in emerging economies have divergent interests and goals, and can access different resources (Sun, Mellahi, & Thun, 2010). Evidence shows that the credibility, career and legitimacy of government officials and SOEs' managers at lower levels (i.e., Cells 1 and 2 in Fig. 2) depend largely on their ability to increase *local* economic output, activities, revenue and

funding (Li & Zhou, 2005; Liu, Sun, & Woo, 2006; Ring et al., 2005). Because of these normative expectations and prescriptions of appropriate goals, encouraging firms to invest abroad is not one of their priorities. By contrast, governments at higher levels are more concerned with globalization, openness and the integration of the country into the world economy – for instance, through the Go Global policy in China (Child & Rodrigues, 2005). This view is consistent with evidence that, while local governments often restructure or privatize SOEs which have surplus labor and resources, state and provincial governments want to maintain social and financial stability, and are thus reluctant to lay off surplus workers (Bai et al., 2006). Because of these institutional forces, they often reallocate surplus labor and assets towards new strategic initiatives, including international expansion.

Government interests, informal institutional arrangements and the level at which they take place may also affect how firms accumulate and manage knowledge and resources (Mahmood & Rufin, 2005). While the intermediary services and resources provided by local governments often relate to the local market (Sun et al., 2010), higher government levels have better international capabilities, can provide privileged information about foreign markets and business contacts, and secure market power and legitimacy. Firms affiliated to a higher government level also have more opportunities for foreign investment, as the reach and scope of state government agencies is more international. Since political influences do not develop in a vacuum, these effects also work in the opposite direction: firms associated with higher government levels may influence institutions to assist their international strategy (Cantwell, Dunning, & Lundan, 2010).

Government affiliation likely influences resource use and willingness to internationalize by generating coercive pressures (e.g., the fear of stricter regulations) and normative expectations. Coercive forces are critical contextual factors impacting decisions surrounding resource selection and allocation (Oliver, 1997). They are particularly important in emerging countries where state control over the market remains high, and governance of EMEs depends largely on managers' interpersonal networks (Peng & Luo, 2000). As coercive pressures are built into exchange relationships (DiMaggio & Powell, 1983), pressures for internationalization are greater on firms closely affiliated to higher-level, and thus more powerful, government agencies.[1] Coercive forces may push EMEs to use resources in ways that depart from previously established strategic plans, but which fit with environmental demands. By establishing stronger authority relationships with EMEs, government agencies expand their jurisdiction and dominance, gain power, and coerce firms into investing abroad. Evidence supports this view, indicating that the help of higher government levels is required to list EMEs internationally (Ring et al., 2005).

Government affiliation also influences internationalization by EMEs through normative mechanisms. EMEs affiliated to higher levels often have former

[1]In cases where governments own EMEs, they can effectively control management, and therefore coercive pressures are required to a lesser extent to change firm behavior.

government officials as non-executive directors on their boards. These officials effectively manage business–government interdependence, and secure information about political decisions (Lester, Hillman, Zardkoohi, & Cannella, 2008). They communicate the plans and expectations of government to the board, exert political influence, and thus promote state internationalization plans. Moreover, as government agencies do not possess firm-specific knowledge, access to information and resources is of limited value without the managerial expertise to integrate them into firm routines and operations. Hence, when both state ownership and government affiliation level are high (Cell 4 in Fig. 2), the marginal benefits of having close relationships with officials from state, rather than local, government further increase. This may lead to stronger effects on cross-border expansion, because the firm has politically connected managers who understand firm-specific idiosyncrasies, and also has access to intermediary state services that are more outward looking. The previous discussion leads to our first hypothesis:

Hypothesis 1: The higher the government affiliation level, the greater its positive effects on EMEs' overseas investment.

Interaction Effects between Firm Resources, Capabilities and Government Involvement

We have incomplete understanding of whether the effectiveness of government pressure in changing EMEs' international expansion is intertwined with their resources, and how these interactions lead to asymmetric internationalization responses. Similarly, little research has examined how firm capabilities influence EME responses to government pressures for international expansion. Capabilities concern the efficiency or "transformation ability" with which a firm combines and employs a given set of resources, and converts them into desired outputs and objectives (Amit & Schoemaker, 1993; Dutta, Narasimhan, & Rajiv, 2005). The distinction between resources and capabilities is important, because variations in firm capabilities can explain why there are persistent differences in EMEs' reactions to institutional pressures.

Marketing and technological resources

Interactions between firm resources and government pressures influence both the willingness and the ability of EMEs to internationalize. First, effects of coercive and normative pressures on willingness to expand abroad are likely greater for EMEs with stronger marketing resources. Availability of resources provides a cushion, allowing firms to pursue new goals and alter their contexts (Castrogiovanni, 1991). Given the historical absence of a market economy in emerging countries, EMEs with strong marketing resources are more sensitive to coercive and normative pressures, because resources buffer firms from the uncertainty in international marketing activities (Castrogiovanni, 1991). Availability of marketing resources may thus catalyze the initiation and implementation of

overseas investment projects, and give EMEs opportunities to imitate successful peers and take new international initiatives in response to mimetic pressures.

Interaction between government involvement and marketing resources can also influence EMEs' ability to internationalize. Marketing activities involve particularly high costs and risks in emerging economies, owing to institutional uncertainty and imperfections (Ramamurti, 2012). EMEs can complement or reduce the costs of marketing by accessing government information regarding foreign opportunities, product attributes and international standards (Khanna et al., 2005). This intermediation decreases transaction costs in various countries (Khanna & Palepu, 2000), and increases EMEs' ability to expand abroad by enhancing the process and efficiency of international marketing (Luo et al., 2010).

Similarly, the willingness and ability to internationalize depend on interactions between EME technological resources and government involvement. Firms with stronger resources devise distinctive structures that help them respond to isomorphic pressures (Scott, 1995). Technology helps firms compete globally and supports international project implementation, increasing managerial willingness to invest abroad in response to coercive forces. Further, government pressures and institutional processes vary across firms, even within the same industry. Since EMEs receive different treatment from governments depending on existing skills (Park & Luo, 2001), a complementary explanation is that coercive pressure on firms is likely a function of their technological abilities. Government may put greater coercive pressures on more visible EMEs with strong technological assets, knowing that such inimitable resources increase the likelihood of successfully entering new markets. Although this selection process is not efficient and systematic, this view is consistent with evidence that government officials prefer to support EMEs with rich resources, because this enables them to engage in their own rent-seeking activities (Bai et al., 2006). Equally, coercive pressures may be higher for EMEs with strong technological resources, because governments recognize they are better able to assimilate technologies from abroad and generate spillovers in the home country (Ramamurti, 2012).

Government involvement and technological resources can also jointly affect EMEs' ability to expand abroad, either by increasing marginal effects of EMEs' existing technology or by facilitating new technology acquisition. Firms' nonmarket relationships constitute their social and political capital (Peng & Luo, 2000), assisting them in obtaining more institutional support than firms lacking higher-level government connections. State-owned EMEs can also add to their technological base and enter global markets by accessing the findings of public R&D, patents and other government-controlled assets unavailable to other firms. Since these assets are state property, a higher government affiliation level helps firms access them. SOEs are also protected by the state, and experience low institutional imperfections (Roth & Kostova, 2003), including stronger intellectual property rights (IPR) protection and quick approval of technology-related OFDI projects. Moreover, governments decrease technology costs by subsidizing OFDI involving R&D, and by assisting EMEs in acquiring foreign scientific talent. By contrast, while there may be mimetic pressures to acquire and deploy frontier technology

across multiple overseas markets, this will be harder for EMEs not partly owned by the state, or without relationships with high-level government. Hence government involvement in increasing internationalization is likely more important for EMEs with stronger marketing and technological assets:

> **Hypothesis 2a**: Government involvement (through state ownership and affiliation) interacts with the EME's intangible resources (namely, marketing and technological resources) to positively affect its overseas investment.

Firm Capabilities

As organizations differ in capabilities, the marginal effects of government involvement on OFDI vary across firms. The impact of government involvement on willingness to invest abroad is likely higher for EMEs with stronger capabilities. Capabilities may assist EMEs in responding successfully and proactively to institutional pressures for change in internationalization strategy (Castrogiovanni, 1991), or create a favorable environment by influencing government regulations. Such EMEs are more sensitive to coercive pressures and changing norms, because their capabilities limit uncertainty. Higher efficiency, along with resource availability, helps firms accelerate organizational learning, reengineer routines and absorb the risk of new foreign investment initiatives. Further, the scope conditions under which EMEs are willing to conform by reallocating their resources are bounded by capabilities (Oliver, 1997). EMEs with inadequate capabilities are less willing to change, because lower organizational efficiency makes conformity unachievable. EMEs also differ in willingness to conform because global competition discourages less capable firms from entering overseas markets, leading to further home market reliance and gradually to a decline in the capabilities required for expanding abroad.

Interaction between government involvement and firm capabilities also influences EMEs' ability to internationalize. Ability to benefit from nonmarket relationships (Peng & Luo, 2000) is constrained by, and dependent on, firm capabilities. Securing benefits from government ties requires political competences (Boddewyn & Brewer, 1994) that enable firms to maximize the advantages of a reciprocal relationship with government (Sun et al., 2010). EMEs with stronger capabilities are better able to exploit such relationships to identify global opportunities, mitigate the liabilities of foreignness and reduce the transaction costs of resource use in foreign markets (Yiu, Lau, & Bruton, 2007). Capabilities also enable firms to take advantage of government support by actively influencing new policies (Luo et al., 2010). By contrast, EMEs with weak capabilities cannot take full advantage of intermediary state services, as they lack absorptive capacity. Moreover, as conformity to coercive pressures requires EMEs to change international organizational arrangements, inefficient EMEs are less successful in becoming isomorphic, and in implementing such structural modifications in response to external pressures. Because of such inefficiencies, their managers are less capable of responding to normative and mimetic pressures. Hence firm capabilities and government

involvement (regardless of its type) are complementary in increasing overseas investment:

Hypothesis 2b: Government involvement (through state ownership and affiliation) interacts with the EME's capabilities to affect its overseas investment positively.

The Effects of Government Involvement on Location and Type of OFDI

The type of government involvement may shape willingness to choose one location over another, and may generate variations not predicted by mainstream location theory. We posit that the location choices of EMEs with high state ownership likely focus on developing markets, whereas firms affiliated to a higher government level increase OFDI in developed countries. Internationalization by emerging-market SOEs is driven by political objectives and normative pressures, and not just by commercial interests (Deng, 2009). SOEs may achieve easier entry into countries with chronically weak institutions, and with rules similar to those in the home country (Kolstad & Wiig, 2012), because they face lower liability of foreignness in opaque and less munificent environments, and are more comfortable with how such governments operate (Buckley, Clegg, Cross, Zheng, Voss, & Liu, 2007). Since emerging-market governments build ties with governments of other developing countries by providing aid and infrastructure, normative and mimetic pressures encourage firms in which state ownership is high to take advantage of such government-to-government relationships and reduce uncertainty associated with nationalization and contract failures (Duanmu, 2012). However, a higher degree of state ownership can be a liability when investing in developed countries, owing to misalignment with local institutional settings. Indeed, the acquisition of many US firms by Chinese SOEs failed as a result of concerns of US politicians that this might be motivated by noncommercial objectives, and might lead to unfair competition. Also, SOEs are weak on marketing and branding, which further limits their ability to enter developed economies successfully.

Nevertheless, a different story may emerge for EMEs that are private, or have a lower degree of state ownership. These firms are less competent in operating in burdensome institutional environments (Duanmu, 2012), and are often discouraged from investing in emerging economies with insufficient market-based rules. Institutional voids make market-related transactions less efficient and more risky in developing countries than in developed nations. As a result, unlike SOEs that use government resources, private firms take a larger risk when investing in emerging and politically unstable countries (Ramasamy, Yeung, & Laforet, 2012). Indeed, the internationalization plans of private firms from emerging countries, such as China, appear risk averse (Liu, Wen, & Huang, 2008). Further, because many private firms have limited legitimacy, and experience discriminatory policies, coercive pressures may push them to enter developed countries, where such discrimination is lower or absent. Hence EMEs with a lower degree of state ownership likely focus on overseas investment into developed countries.

Moreover, location choices depend on government affiliation level. For EMEs affiliated to a higher government level, we expect OFDI to be driven more by normative expectations to enhance competitiveness and capabilities by accessing large developed markets (Ramamurti, 2012). Strong coercive pressures generated by being affiliated to higher government levels likely increase EME willingness to invest in developed countries, where they can innovate and address competitive disadvantages. Such location choices are in line with central government's aim to access foreign technology, generate spillovers at home and nurture indigenous global champions (Cui & Jiang, 2012; Liu, Wang, & Wei, 2009). Such normative expectations are less likely achieved by EMEs with high state ownership, because developed-country governments are concerned about the motives of SOEs. Further, when the level of government affiliation is high, EMEs may invest in developed economies to respond to normative pressures and enhance legitimacy with government officials, as entry into developed markets signals success and credibility to home governments (Yamakawa, Peng, & Deeds, 2008).

As competitive pressures and barriers associated with institutional and cultural distance are higher in developed markets, the benefits of being affiliated to a higher government level are crucial in overcoming such constraints. In contrast, EMEs affiliated to lower government levels may find it difficult to deal with the complexity involved in investing in developed nations, and thus venture into countries institutionally closer to home. Reinforcing this view, firms controlled by local governments appear attracted to countries with weak political systems (Ramasamy et al., 2012). In sum, coercive and normative pressures associated with higher government levels are likely effective in increasing OFDI in developed countries, whereas normative and mimetic pressures generated by higher degree of state ownership drive foreign investment in developing countries:

Hypothesis 3a: The higher the degree of state ownership, the greater its positive effects on EMEs' overseas investment into developing countries than into developed countries.

Hypothesis 3b: The higher the government affiliation level, the greater its positive effects on EMEs' overseas investment into developed countries than into developing countries.

The nature of government involvement and institutional pressures may also influence OFDI type (resource- or market-seeking). As normative pressures associated with state ownership encourage firms in emerging economies to promote government initiatives, resource-seeking investment by SOEs serves both firms' own needs and growing demand for resources at home (Luo & Tung, 2007). For example, the Indian government has mandated state-owned oil companies to secure overseas oil deposits (UNCTAD, 2007). Also, normative and mimetic forces increase SOEs' willingness to engage in resource-seeking OFDI, because state ownership lowers the implementation costs of such projects. Hence state-controlled EMEs more likely invest in resource-seeking OFDI, as government backing enables them to engage in such long-term projects. This prediction is consistent with evidence that takeovers by Chinese SOEs target critical resources (Ramasamy et al., 2012). By contrast, private firms shoulder fewer government objectives, and are less willing to conduct resource-oriented

investment driven by nonmarket principles. They are more likely than SOEs to suffer from a liability of smallness, and are less able to conduct resource-seeking activities characterized by uncertainty and long gestation periods (UNCTAD, 2007). Because of efficiency pressures, these firms focus on the business potential of foreign investment projects, and favor market-oriented OFDI with a shorter payback cycle.

Further, we expect the effects of government affiliation on the decision to engage in resource-or market-seeking projects to differ. When EMEs, especially private ones, are affiliated to higher government levels, overseas investment is likely driven by the desire to invest in market-seeking projects. Such investment requires reliable information about foreign countries and customers. As lower government levels typically do not possess these skills, EMEs cannot rely on them to compensate for such shortages (Sun et al., 2010). This creates more uncertainty in market-seeking projects, and may limit the willingness and ability of firms affiliated to lower levels to engage in market-seeking OFDI. By contrast, affiliation with higher government levels mitigates information asymmetry and frictions, providing the support and knowledge needed for market-seeking investment (in contrast to the financial resources required for resource-seeking investment that come from state ownership; Ramamurti, 2012). Such firms therefore often build on established export channels to invest in market-seeking projects and develop new distribution networks. Affiliation with higher government levels also provides greater visibility to foreign customers, and facilitates listing on overseas stock markets. This in turn enables foreign profile-raising that encourages market-seeking behavior (Ring et al., 2005). Since market-seeking OFDI is consistent with higher government levels' interest in promoting openness and integration into the global economy, coercive and normative pressures generated by government–business ties result in market-seeking projects that have the potential to enhance firm performance. As high-level state governments can use SOEs to secure resources from abroad, this practice also complements their strategic objectives. This reasoning suggests that affiliation to higher government levels is more effective in influencing the willingness and ability of EMEs to seek new markets, while the normative and mimetic pressures associated with state ownership likely drive resource-seeking investment:

Hypothesis 4a: The higher the degree of state ownership, the greater its positive effects on EMEs' resource-seeking overseas investment than on market-seeking overseas investment.

Hypothesis 4b: The higher the government affiliation level, the greater its positive effects on EMEs' market-seeking overseas investment than on resource-seeking overseas investment.

Data and Methods

Data Overview

China is rapidly becoming an important contributor to world OFDI, yet the state remains crucial in shaping firm behavior, and in distributing government-controlled resources. Thus China offers an appropriate research setting for examining how

institutional and resource-based factors interact to shape international expansion. We employ two novel firm-level datasets. Information on firms' OFDI was obtained from the Chinese Ministry of Commerce, whose database provides systematic information on all Chinese firms' OFDI from 2006 to 2007, including the name of parent firms, foreign subsidiaries, investment locations, the total capital of the project and the capital invested by Chinese firms. It thus enables us to explore the role of government involvement in explaining Chinese OFDI in a way not previously possible.[2] After excluding firms from service and mining sectors, the sample included 1231 manufacturing firms that invested in 1390 overseas projects.

The second data source is the *Annual Report of Industrial Enterprise Statistics* (ARIES), obtained from the State Statistical Bureau of China. ARIES is the most comprehensive firm-level dataset compiled by the Chinese statistical office, accounting for about 90% of total output in most industries.[3] It includes manufacturing firms with annual turnover of over 5 million renminbi, and provides information on ownership structure, tangible assets, number of employees, R&D, advertising, value-added, sales, new product sales and exports. Using this multi-industry sample increased both variance and the number of observations.

After merging the two databases and excluding seven outliers, we have a final sample of 626 firms with complete information.[4] For firms with two or more foreign projects (43 cases), we added the value of each firm's projects together. We also checked for coding mistakes and unusable or unreliable observations. Because of new market entry, exit and ownership restructuring, the number of firms changed from year to year. We addressed this issue by obtaining information from the websites of parent firms. While our dependent variables were constructed using data for 2006–2007, we lagged the independent variables by one year.

Methods

Dependent variable

For our dependent variable (foreign investment), we followed a large number of similar studies (e.g., Buckley et al., 2007) and used the actual amount of annual OFDI by each firm. This operationalization is appealing because of ease of comparison, and because it is a continuous variable that reflects accurately a firm's strategic choice to invest abroad, and the level of such investment.

[2]The dataset does not allow us to identify the mode of entry (e.g., greenfield vs. mergers and acquisitions).

[3]Different versions of this dataset have been used in previous studies (e.g., Liu et al., 2009).

[4]Chinese firms have invested overseas only in recent years. We only have two years of data, and some Chinese firms do not invest in two consecutive years. We therefore treat our data as cross-sectional rather than unbalanced panel data.

Independent variables

Building on prior studies (e.g., Tseng, Tansuhaj, Hallagan, & McCullough, 2007), *technological* and *marketing resources* are captured by R&D expenses per employee, and marketing-related expenses per employee, respectively. We use total factor productivity (TFP) to proxy *firm capabilities*. TFP is defined in the usual way as $\log Y - \beta \log K - (1-\beta)\log L$ (Coe & Helpman, 1995), where Y is value-added; K is capital, including tangible assets, technological assets and marketing assets; and L is number of employees. The use of TFP is appropriate because it captures how efficiently multiple complementary resources are combined, and the firm's capability to produce more output from the same amount of inputs. It is thus consistent with the definition that capability is the firm's ability to transform a given set of resources into outputs (Dutta et al., 2005).

We use two variables to measure government involvement. The "degree of state ownership" (i.e., the extent to which the state participates in each business) is measured as the share of state-owned capital in the total capital of the firm. "Government affiliation level" is constructed for each firm separately using the "government level" at which the firm is affiliated. ARIES lists five levels of government affiliation: state, provincial, city, county and other -levels. We assigned a value to each level, between 5 and 1: a value of 5 is assigned to firms very closely affiliated to government (i.e., at the state level), and a value of 1 to firms affiliated at the lowest government level.[5] The correlation between the degree of state ownership and government affiliation level is particularly low (0.21), confirming the distinction between the two constructs.

Control Variables

First, we use the number of employees to control for *firm size*.[6] Second, experience is a valuable and inimitable firm-specific resource accumulated over time. We control for such effects by including "firm age," measured by the number of years since the establishment of the organization. Third, foreign ownership may stimulate internationalization due to knowledge spillovers. We measure "foreign ownership" using the ratio of assets owned by foreign investors to total assets. Furthermore, we incorporate a dummy variable (stock-listed) that separates listed from non-listed firms (equal to 1 if listed).

Fifth, another variable associated with foreign expansion is "human resources," operationalized using each firm's training expenditure per employee. We operationalize *tangible resources* as fixed assets per employee. Although organizational slack (or excess resources) is a sign of inefficiency, it may increase the ability to pursue new strategies and enter markets. Following previous studies (e.g., Bromiley, 1991), "organizational slack" is captured using the debt to equity ratio.

[5]ARIES incorporates all privately owned firms in this category.

[6]Following a reviewer's suggestion, we used the squared term of firm size to examine potential nonlinear effects. This term, however, was statistically insignificant.

The internationalization pattern of firms affiliated to a business group may also differ from that of other organizations. We include a dummy variable (Business group) equal to 1 if the firm is affiliated to a business group.

Furthermore, highly profitable firms are more likely to invest abroad, as they possess better financial resources. We constructed a "profitability" measure using the ratio of operating profits to sales. Exporting activity enhances international competitiveness, and provides information about new markets. We use the ratio of export sales to total sales to control for *export intensity*. Firms may react to increased competitive pressure by engaging in OFDI to maintain or strengthen market position. We construct a measure of "competition" for each industry by measuring the rate of increase in the number of intra-industry firms.

Chinese government strongly encourages OFDI in some industries. Firms in encouraged industries receive more institutional support and incentives than counterparts in other sectors. We include a dummy variable (industry policy) equal to 1 if the firm operates in an encouraged industry. Data indicating which industries were encouraged were collected from the Chinese Ministry of Commerce. Government involvement may vary across regions, depending on the development of market-based mechanisms. To account for this effect, we incorporate a measure of region-specific "marketization" developed by Fan, Wang and Zhu (2006) for 2005.[7] The higher the value of marketization index, the higher the level of market-based system in a region. Table 1 summarizes our variables and their expected effects on international expansion.

Results

Table 2 provides descriptive statistics. All correlations are fairly low, and variance inflation factors are well below the acceptable level of 10 (Neter, Wasserman, & Kutner, 1985), indicating no serious problems of multicollinearity. Nevertheless, we mean-centered variables in the interaction terms to avoid problems of multicollinearity and increase interpretability of interactions (Aiken & West, 1991). Following previous studies (e.g., Elango & Pattnaik, 2007), we also lagged all independent variables by one year, taking into account that a firm's actions may take some time to influence OFDI. We employed hierarchical OLS regression. To deal with possible heteroskedasticity, we estimated OLS regressions using Huber–White's robust standard error (White, 1980). Table 3 reports the results concerning the effects of government involvement on OFDI.

[7]Fan et al. (2006) have been publishing the report on the progress of marketization in China's regions annually since 2001. This measure has been used in several other studies (e.g., Ying, 2006). This comprehensive composite index evaluates the consistency of a province's policies and institutions regarding economic freedom in five key areas: the role of market relative to government; the development of the private sector; the development of commodity and factor markets; and the development of free-market institutions. Twenty-six indicators are employed to assess these five dimensions and calculate a marketization index. The values of the index (for 2005) range from 4.445 to 10.407.

Table 1 Definitions of variables and descriptive statistics

	Definition	Mean	Standard deviation	Expected effect
Dependent variable				
OFDI (million yuan)	Investment in foreign countries	26.482	80.476	
Control variables				
Firm age	Number of years since firm established	11.772	12.834	+
Firm size	Number of employees (thousand)	6.121	1.492	+
Foreign ownership	Ratio of assets owned by foreign investors to total assets	0.101	0.256	+
Stock listed	Equal to 1 for listed companies, 0 otherwise	0.163	0.37	+
Human resources	Training expenditure per employee	0.227	0.586	+
Tangible resources	Fixed assets/number of employees	13.586	42.69	+
Organizational slack	Ratio of equity to debt	1.768	7.037	+/−
Business group	Equal to 1 for firms affiliated with an industrial group and 0 otherwise	0.163	0.37	+
Profitability	Ratio of profit to total assets	0.029	1.165	+
Export intensity	Share of export sales over total sales	0.351	0.375	+
Competition	Increase in number of intra-industry firms	0.186	0.068	+
Industry policy	Equal to 1 for "encouraged industries" and 0 otherwise	0.518	0.5	+
Marketization	Adopted from Fan et al. (2006). See Methods section for details	8.652	1.521	−
Firm resources and capabilities				
Marketing resources	Marketing and advertising expenditure/ number of employees	0.262	1.616	+
Technological resources	R&D expenditure/number of employees	1.126	5.317	+
Firm capabilities	Gauged by total factor productivity. See Conceptual framework section for details	0.021	0.018	+
Government involvement				
State ownership	Ratio of state-owned capital to total capital	0.057	0.207	+
Government affiliation level	See Data and Methods section for details	1.916	1.361	+

Table 2 Correlation matrix of independent variables

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Firm age	0.507	−0.111	0.107	0.089	−0.013	0.220	−0.001	−0.137	0.006	0.157	−0.146	0.508	0.208	0.135	0.112	0.290	0.152
2 Firm size	1	−0.070	0.005	0.023	−0.025	0.275	0.007	−0.089	0.096	0.126	−0.159	0.598	0.294	0.089	0.082	0.162	0.359
3 Foreign ownership		1	−0.106	−0.066	0.015	−0.069	−0.064	0.181	−0.035	−0.123	0.126	−0.084	−0.069	−0.047	−0.007	−0.084	−0.002
4 Stock listed			1	0.094	−0.016	0.145	−0.079	−0.131	−0.012	0.097	−0.073	0.119	0.105	0.067	0.292	0.084	0.193
5 Human resources				1	−0.030	0.008	−0.016	−0.147	0.002	0.119	0.011	0.078	0.099	0.094	0.178	0.071	−0.019
6 Organizational slack					1	0.057	0.013	−0.037	−0.029	0.015	−0.059	−0.010	−0.009	−0.013	0.000	−0.025	−0.023
7 Business group						1	−0.071	−0.109	−0.040	0.054	−0.080	0.352	0.185	0.143	0.082	0.213	0.196
8 Profitability							1	0.015	−0.027	−0.019	−0.007	−0.073	0.008	0.000	−0.010	0.033	−0.076
9 Export intensity								1	−0.030	−0.210	0.310	−0.144	−0.122	−0.101	−0.097	−0.165	−0.094
10 Competition									1	0.271	0.054	0.060	0.042	−0.035	0.029	−0.006	0.082
11 Industry policy										1	−0.137	0.177	0.149	0.023	0.193	0.103	−0.045
12 Marketization											1	−0.147	−0.083	−0.022	0.043	−0.215	−0.083
13 Tangible res.												1	0.367	0.179	0.197	0.396	0.189
14 Technol. res.													1	0.607	0.130	0.184	0.212
15 Marketing res.														1	0.135	0.055	0.140
16 Firm capabilities															1	0.152	0.120
17 State ownership																1	0.212
18 Gov. affiliation level																	1

Table 3 Regression results: effects of government involvement on OFDI

	Model 1	Model 2	Model 3	Model 4
Control variables				
Firm age	0.028	−0.071	0.078	−0.024
Firm size	2.834	4.671*	2.163	4.009
Foreign ownership	−4.493	−3.769	−4.719	−4.04
Stock listed	3.198	2.400	1.418	0.466
Human resources	1.426	1.936	1.339	1.942
Tangible resources	0.471	0.567***	0.430***	0.531***
Organizational slack	−0.024	−0.217	−0.171	−0.183
Business group	−4.008	−4.706	−6.399	−7.921
Profitability	1.350	1.725	1.146	1.549
Export intensity	3.390	3.327	5.267	5.284
Competition	1.738	1.514	2.176	1.921
Industry policy	1.443**	1.597**	1.501**	1.663**
Marketization	−8.776***	−9.231***	−7.674**	−8.071***
Firm resources and capabilities				
Marketing resources		3.770*		3.727*
Technological resources		−1.858		−1.995
Firm capabilities		3.560		3.656
Government involvement				
State ownership			3.131**	3.269**
H1: Government affiliation level			4.953**	5.401**
N	626	626	626	626
F-statistic	9.420***	8.910***	9.160***	8.74***
R^2	0.329	0.339	0.338	0.348
Adjusted R^2	0.295	0.301	0.301	0.308

*, **, *** denote significance level at 10%, 5% and 1%, respectively.

Model 1 includes only control variables. Firm resources and capabilities are introduced in Model 2. The effects of technological and marketing resources and firm capabilities on OFDI are statistically insignificant. Although these results contradict studies for developed economies, they support the view that firm-specific assets and capabilities are not always important for the internationalization of EMEs (Yiu et al., 2007). Model 3 incorporates variables for state ownership and government affiliation level. Both variables are highly significant, and the significant coefficient of government affiliation level corroborates Hypothesis 1. Thus the effects of government involvement on OFDI are stronger for EMEs affiliated to higher government levels than for EMEs affiliated to lower government levels. Results are robust to inclusion of variables for resources and capabilities (Model 4),

highlighting the importance of government involvement in driving OFDI from EMEs. The evidence supports the view that government lays the foundations for the international expansion of Chinese firms (Peng et al., 2008).

Table 4 presents the results for hypotheses pertaining to interaction effects (Hypotheses 2a and 2b). Following the usual practice in moderated regression analysis (e.g., Peng & Jiang, 2010), we enter two-way interactions in Models 1–6 successively. The interaction term between state ownership and marketing resources in Model 1 is insignificant, while that between government affiliation and marketing resources is significant (Model 2). Similarly, although the interaction term in Model 4 is insignificant, it is significant in Model 3. Therefore Hypothesis 2a receives partial support. Hypothesis 2b suggests that government involvement (through state ownership and government affiliation) interacts with firm capabilities to affect overseas investment positively. The interaction term is insignificant in Model 6, but is significant in Model 5. Hence Hypothesis 2b is partly corroborated. Model 7, which includes all the interaction terms simultaneously, indicates that the results for these interactions remain qualitatively the same. To explain the moderating effects of government involvement better, these relationships are presented in Fig. 3.

The results in Table 5 test the effects of government involvement on the location and type of OFDI. The dependent variable in Model 1 is an aggregate measure of OFDI (i.e., similar to Model 4 in Table 3), whereas Models 2–5 employ split-sample analysis to estimate the results according to location and type of OFDI. As state ownership is statistically insignificant in both Models 2 and 3, the results do not support Hypothesis 3a. By contrast, government affiliation is statistically significant in Model 3 but insignificant in Model 2. These results corroborate Hypothesis 3b. Findings in Models 4 and 5 suggest that state ownership plays a more important role in resource-seeking OFDI than in market-seeking OFDI. By contrast, the opposite is true for government affiliation, which is significant in stimulating market-seeking OFDI, but not resource-seeking OFDI. Hence the results provide strong support for Hypotheses 4a and 4b, indicating that government involvement influences the type of OFDI. Overall, the results indicate that affiliation to a higher government level is more important than state ownership for investment in developed markets, whereas neither type of government involvement appears to have a significant effect on OFDI in developing markets. Similarly, state ownership drives resource-seeking investment, whereas affiliation to higher government levels is more effective in influencing the willingness and ability of EMEs to seek new markets.

Robustness Checks

Some explanatory variables, such as firm capabilities, may be influenced by OFDI. However, as most Chinese FDI projects have started only recently, reverse causality problems associated with the possibility that OFDI may impact some firm characteristics are less likely. Nevertheless, we controlled for possible estimation biases in several ways. Given the cross-sectional nature of the study, we reduced concerns about

Table 4 Regression results: interaction effects

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Control variables							
Firm age	−0.112	−0.052	−0.118	−0.058	−0.024	−0.026	−0.05
Firm size	4.593**	3.097*	2.907	4.050**	3.030	3.475*	5.139***
Foreign ownership	−4.816	−4.092	−4.052	−3.776	−4.211	−3.386	−4.851
Stock listed	0.446	0.766	0.192	1.433	0.501	1.533	1.912
Human resources	2.539	1.936	1.926	1.324	1.806	1.572	1.327
Tangible resources	0.625***	0.549***	0.531***	0.316***	0.527***	0.529***	0.221
Organizational slack	−0.198	−0.188	−0.178	−0.204	−0.179	−0.212	−0.209
Business group	−7.992	−7.476	−7.390	−6.660	−7.579	−6.208	−8.400
Profitability	1.914	1.623	1.552	1.910	1.479	1.301	2.181
Export intensity	2.689	5.265	5.372	4.888	4.902	5.895	1.477
Competition	2.165	2.319	1.896	2.676	1.814	3.344	4.442
Industry policy	1.396**	1.682**	1.664**	1.720**	1.675**	1.694***	1.427**
Marketization	−7.898***	−8.017**	−8.063***	−7.898**	−8.091***	−8.083***	−7.522***
Firm resources and capabilities							
Marketing resources	6.115	3.522	4.045*	2.358	3.821*	3.596*	9.545**
Technological resources	−3.247	−2.150	−1.647	−1.808	−2.011	−1.933	−0.623
Firm capabilities	3.776	3.653	3.653	3.718	3.787	5.204*	5.676**
Government involvement							
State ownership	3.172**	3.153	3.301**	2.155	3.300**	1.627	0.563
Government affiliation level	5.691**	5.530**	5.313**	6.422**	5.259**	6.277**	6.784**

(*continued*)

Table 4 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Interactions							
Hypothesis 2a: State ownership × Marketing resources	0.628					0.728	
Hypothesis 2a: Government affiliation level × Marketing resources		6.551***				9.690***	
Hypothesis 2a: State ownership × Technological resources			0.094***			0.101***	
Hypothesis 2a: Government affiliation level × Technological resources1				−0.208		−0.899	
Hypothesis 2b: State ownership × Firm capabilities					2.532***	2.447***	
Hypothesis 2b: Government affiliation level × Firm capabilities					−0.793	−1.876	
N	626	626	626	626	626	626	626
F-statistic	8.890***	8.520***	8.500***	8.950***	8.510***	8.890***	8.860***
R^2	0.359	0.349	0.348	0.360	0.349	0.359	0.390
Adjusted R^2	0.318	0.308	0.307	0.320	0.308	0.318	0.346

*, **, *** denote significance level at 10%, 5% and 1%, respectively.

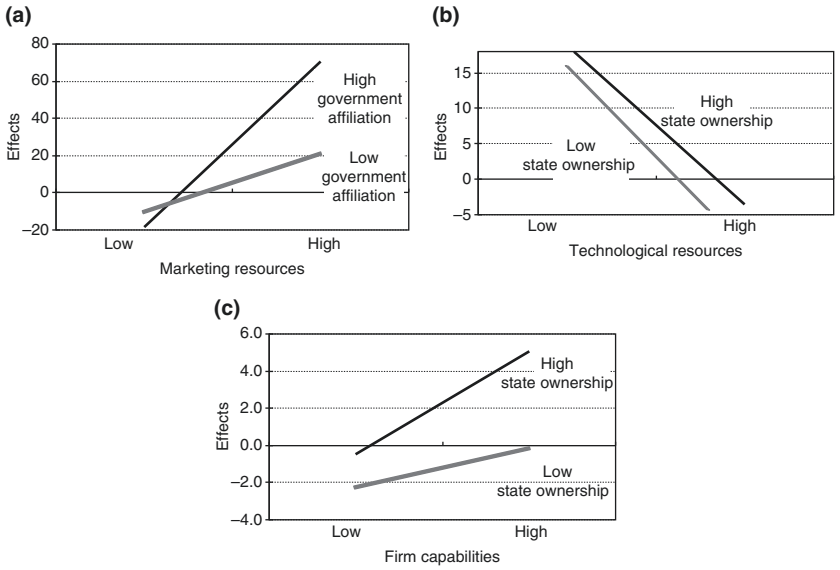

Fig. 3 Moderating effects of government involvement on OFDI (based on Table 4): (a) interaction effects of marketing resources and government affiliation; (b) interaction effects of technological resources and state ownership; (c) interaction effects of capabilities and state ownership

endogeneity by incorporating several variables that account for firm characteristics. We also used lagged independent variables to reduce the potential endogeneity bias, if any.

Further, we employed the Hausman test (Hausman, 1978) to examine the possibility of simultaneity between explanatory variables and OFDI. We first identified valid instrumental variables (IVs). A valid instrument should be correlated with the key explanatory variables, and should also be orthogonal to the error term. Following standard practice (Gujarati, 2009; Wooldridge, 2009), we used lagged variables for firm resources, capabilities and state ownership as IVs.[8] The rationale behind the selection of lagged variables is that as the events and decisions related to these variables occurred in the past, they are not correlated with the error term in the present (Gujarati, 2009; Wooldridge, 2009). To conduct the analysis, we combined our data with information from the China Economic Census in 2004. This resulted in a sample of 487 firms.

To test the exclusion restriction that each IV does not affect the dependent variable through channels other than the suspected endogenous variables, we regressed residuals from the second-stage estimations on the IVs If the IVs affect the key variables through other mechanisms, the residuals from the second-stage estimations will be correlated with the IVs (Lu & Tao, 2009). Table 6 reports the

[8]Lagged variables for 2004 were employed, as China did not conduct industrial census before 2004.

Table 5 Regression results: the role of government involvement in explaining location and type of OFDI

	Model 1	Model 2 – OFDI in developing countries (H3a and H3b)	Model 3 – OFDI in developed countries (H3a and H3b)	Model 4 – Resource-seeking OFDI (H4a and H4b)	Model 5 – Market-seeking OFDI (H4a and H4b)
Control variables					
Firm age	−0.024	−0.167	0.104	0.442	−0.223
Firm size	4.009	−4.114	4.342	−0.024	8.631***
Foreign ownership	−4.04	2.281	−13.924	−24.114	−4.950
Stock listed	0.466	19.165**	1.106	−10.188	11.311*
Human resources	1.942	0.650	5.991	−15.966	3.250
Tangible resources	0.531***	−0.032	2.452***	0.431*	0.424*
Organizational slack	−0.183	−0.480	−0.164	−1.280	−0.143
Business group	−7.921	−26.811***	6.692	−30.100	−0.782
Profitability	1.549	−0.672	7.933	−0.708	11.075
Export intensity	5.284	0.917	15.562	17.924	0.689
Competition	1.921	7.768**	−13.467	6.383	−12.754**
Industry policy	1.663**	0.284	3.102***	4.021***	1.462***
Marketization	−8.071***	0.477	−5.343	−13.218*	−1.908
Firm resources and capabilities					
Marketing resources	3.727*	−2.202	5.056	−1.281	20.287***
Technological resources	−1.995	0.468	−3.363	−6.234	0.079
Firm capabilities	3.656	−0.006	2.876	5.090	0.428
Government involvement					
State ownership	3.269**	−1.576	0.934	16.795***	−2.112
Government affiliation level	5.401**	−2.635	8.397**	7.101	12.260***
N	626	282	344	144	482
F-statistic	8.740***	10.890***	5.530***	3.910***	3.250***
R^2	0.348	0.615	0.393	0.568	0.208
Adjusted R^2	0.308	0.559	0.322	0.423	0.144

*, **, *** denote significance level at 10%, 5% and 1%, respectively. Dummy variables for time and industries were included in the models but are not reported in the table.

Table 6 Exclusion restriction test

	Coefficients	*t*-values
Tangible resources (2004)	-1.23×10^{7}	−0.03
Marketing resources (2004)	−0.00003	−0.06
Technological resources (2004)	−0.0002	−0.03
Human resources (2004)	0.0002	0.03
Firm capabilities (2004)	18.567	0.32
State ownership (2004)	10.764	0.35
Government affiliation level (2004)	−2.491	−0.33
F-statistic	0.04	
R^2	0.006	

Note: This test regressed the residuals of the second-stage estimations on the instrumental variables.

results. All the estimated effects on IVs are statistically insignificant, confirming that the IVs are indeed orthogonal to the error term. To examine the endogeneity of key variables, we conducted a Hausman test and compared the OLS and 2SLS estimates. Results show that the chi-square value is 11.03 (degrees of freedom = 20), much lower than the critical value of 28.41 at a 10% significance level. Therefore the null hypothesis that the differences in OLS and 2SLS estimated coefficients are not systematic is not rejected, suggesting that key variables (firm resources, firm capabilities and state ownership) should jointly be treated as exogenous, and that using OLS is well justified. Furthermore, we also normalized the resource variables using sales (rather than number of employees) and re-estimated the regressions. This approach produced results similar to those in Tables 3–5. Finally, we used dummy variables for location and type of OFDI (rather than split-sample analysis) and re-estimated the models. The results remained qualitatively the same.

Discussion and Conclusion

Theoretical Contributions and Implications

Our contribution lies in identifying and documenting the mechanisms through which governments impact EME internationalization. Our overarching argument is that government involvement is associated with various institutional pressures and benefits that influence the ability and willingness of EMEs to internationalize by: (1) helping firms overcome information, transaction cost and resource constraints (Khanna et al., 2005); and (2) influencing the strategic objectives and decisions of managers, and the way in which they allocate firm resources. Modeling government involvement as an endogenous firm-level construct assists

us in demonstrating how firm-specific advantages originate from, or are reinforced by, home-country institutions; and in turn how different government levels impact EME internationalization by affecting the development and use of such advantages and resources.

In showing that EME international expansion is institutionally embedded, the evidence points to the importance of looking beyond firm boundaries to understand the origins of OFDI from emerging markets (Meyer & Peng, 2005). We examine differences in the organization and objectives of governments, and find evidence that an important source of variation in EME internationalization is the idiosyncratic manner in which firms are affiliated with government. We enrich the network literature that indicates that relationship-based capabilities enhance firm performance (Peng & Luo, 2000) by showing that such relationships also constitute an intrinsic part of EME internationalization behavior. We also contribute by demonstrating that a firm's network of government ties is composed of different types of relationships. These shape firm internationalization differently by providing different types of advantages, and by creating different isomorphic pressures.

We add to the under-researched area concerning the ownership advantages that help EMEs internationalize (Ramamurti, 2012). Unlike studies that treat government as a unidimensional construct, we conceptualize it as an arrangement of hierarchically structured units or levels. Our approach deepens understanding of the complex mechanisms through which government involvement influences the actions of EMEs by explicitly recognizing that different types and levels of government ownership and affiliation have different objectives, exert different institutional pressures, and thus impact the internationalization of EMEs differently. Our empirical findings confirm this premise. Although government involvement produces strong independent effects on OFDI, not all types of government involvement are equally beneficial to all EMEs, and not all firms possess a similar ability to internalize such advantages or respond to institutional pressures. Hence, rather than merely asking "What is the generic effect of government on OFDI?", we demonstrate that this effect depends upon contingencies associated with the firm's own capabilities and resource position, the type of involvement, and the location and type of OFDI. The results have several implications.

First, we demonstrate how RBV and institutional lenses complement and influence one another. Although the independent effects of firm resources on internationalization are not significant, an interesting story emerges for the interaction between government involvement and firm resources. The impact of government on internationalization is higher for EMEs with stronger marketing and technological resources, suggesting they are better able to implement overseas investment projects in response to institutional pressures. Interestingly, the results further show that these interactions yield differential effects depending on resource type. Although the interaction effect of government affiliation level and marketing resources is particularly strong and highly significant, the interaction between state ownership and marketing resources is statistically insignificant. The opposite is true for technological resources: that is, the interaction between state ownership (rather than government affiliation level) and technological

resources is crucial in increasing cross-border expansion. Therefore, depending on the type of government involvement, it appears that different resources become more important in assisting EMEs to respond to institutional pressures for internationalization.

Similarly, although firm capabilities have an insignificant independent effect on OFDI, they interact with state ownership (but do not depend on government affiliation) to increase international expansion. The implication is that the ability of government to stimulate international expansion is dependent upon firm capabilities. Equally, these results suggest that firms with stronger capabilities are more sensitive to pressure, and are better able to use intermediary state services and other advantages (Khanna & Palepu, 2000). They also indicate that institutional factors influence the ability to use resources, and point to the importance of considering how resource-based and institutional forces *jointly* shape internationalization decisions.

Another key implication is that intangible resources alone might not be enough for stimulating international expansion. Hitherto the RBV has not explained why two firms with similar assets would follow different international trajectories. Our results enrich resource-based reasoning by indicating that, in emerging economies, resources trigger foreign expansion only when firms are strongly supported by government. Equally, an EME's ability to employ its resources and internationalize depends on its effectiveness in managing government ties. By highlighting the complementarity between internally generated resources and external institutions, the results explain why resource-constrained EMEs are able to expand abroad, and demonstrate why interactions between institutions and organizations should be factored theoretically into international business research.

Further, we demonstrate that the type of government involvement and institutional forces influence not only EMEs' decisions to invest abroad but also the location and type of investment. While government involvement through state ownership plays a more important role in stimulating resource-seeking OFDI, affiliation with higher government levels more likely leads to market-seeking investment. The findings also indicate that EMEs affiliated to higher government levels are attracted to developed countries, showing that as the priorities of governments at different levels vary, their involvement results in different internationalization outcomes. While prior explanations about the location and type of OFDI typically focus on firm-specific idiosyncrasies, our results suggest that government has significant power in explaining interfirm differences in internationalization. Hence, rather than assuming that OFDI decisions are driven merely by the firm's strategic intent, we demonstrate that pressures and advantages associated with government influence the level, type and locational patterns of OFDI.

Overall, our results highlight the value of integrating resource-based and institutional lenses to address how institutional factors impact, or are influenced by, idiosyncratic firm characteristics. By treating institutional forces as endogenous factors, government involvement emerges as an integral component of the

internationalization endeavors of EMEs. Our study design enables us to open the black box of "government", consider its different types and levels, and offer a more complete explanation of how government impacts the ability and willingness of EMEs to invest abroad, and the location and type of OFDI. Although we find that the independent effects of institutional forces are stronger than those of resource-based factors, we also show that resources have significant effects when combined with government involvement. Interestingly, this suggests that EMEs are ambidextrous, and successfully exploit institutional complementarities. They overcome various constraints, respond to various isomorphic pressures, and expand abroad by being able to develop, combine and balance relationship-based capabilities and typical resources such as technology and marketing.

Implications for Practice

Our findings have three important implications for EME management. First, instead of viewing the institutional environment as an exogenous element, EMEs can proactively and systematically exploit and internalize institutional advantages by carefully incorporating political actors into their governance structure and strategic planning. State ownership and affiliation with government interact with idiosyncratic firm attributes to shape the ability to use resources more efficiently and internationalize. Although the development of distinctive technological and marketing resources is difficult, government involvement compensates for weak internal resources. Nevertheless, since institutional advantages are context specific, it is unclear whether EMEs can transfer and use these competences in foreign markets. In such situations, transferable resources such as technology will be more important outside the home country. Likewise, managers should not rely excessively on political actors, as this may reduce the motivation to exercise entrepreneurial capabilities, and lead to decline.

Second, our study suggests that EMEs must excel at developing both relationship-based and conventional capabilities. A business model resting upon the combination of the two is the most fruitful mechanism for increasing international expansion. An important implication is that the balance between the two strategies may lead to different internationalization patterns, and determine firm competiveness in the global economy. Managers should recognize that although the two strategies are complementary, they often involve incompatible processes and routines. Such incompatibility may make their simultaneous pursuit and implementation challenging, since the two strategies will inevitably have to compete with one another for managerial attention and resources. Finally, as state ownership and government affiliation produce differential effects, managers need to invest in those types of government ties that help overcome weaknesses. Market-seeking projects, for instance, are more likely implemented through government ties. By contrast, EMEs wishing to invest in resource-seeking projects will likely benefit more from government involvement in the form of state ownership.

Limitations and Future Research

Potential endogeneity is typically found in this type of research. Although our robustness checks suggest this is of less concern here, future studies should adopt longitudinal data or experimental methods to consider the dynamics between resources, government involvement and OFDI. Similarly, greater interaction between governments and firms is increasingly leading to interdependencies, implying that governments have less scope for autonomous policies. Although institutions can have a profound impact on business strategy, the institutional environment can also be influenced by large organizations (Cantwell et al., 2010). These relationships involve complex mechanisms, with reason, diplomacy and persuasion at one end and force at the other (Boddewyn & Brewer, 1994). Examining the mechanisms shaping how these reciprocal relationships evolve would be a fruitful avenue for further research.

Second, as our sample does not incorporate investors with below 5 million renminbi annual turnover, it would be difficult to generalize our findings to very small Chinese businesses.[9] While future studies could incorporate smaller Chinese firms, this may not be a major concern, since such firms seem less likely to be involved in OFDI. Third, as the institutional environment varies significantly across emerging economies, our focus on China could raise some concerns regarding generalizability. For instance, although most emerging countries are regulated by different government levels, the way in which firms are affiliated to government and the nature of such relationships may vary across countries. To understand why governments in various nations adopt different ways of influencing international expansion, a useful extension would be to employ comparative research and examine the role of government across emerging economies.

Future qualitative research could also examine how exactly government relationships translate into firm-specific advantages, and how these advantages can be transferred and used in foreign markets. We examined government ties, but data limitations did not allow us to explore the role of other types of ties (e.g., ties between managers) in increasing internationalization. Further, investigating firm-, industry-and location-specific contingencies other than those examined in this study would also be a productive avenue for future research. For example, it would be valuable to understand how the role of government involvement and the associated benefits and pressures differ across manufacturing and service sectors. Despite these limitations, our study helps explain the mechanisms through which government impacts EMEs that take an internationalization path that differs markedly from that of conventional MNEs.

[9]Despite a few high-profile Chinese mergers and acquisitions that attracted much interest and discussion, the majority of Chinese investors are medium-size enterprises, and the amount of investment is fairly small. For example, Chinese firms invested US$1.3 million on average in 2007, which is much lower than the average figure for developed countries (around US$6 million).

Our analysis provides insights that open the way to explore heterogeneity in the degree of government ownership, as well as the nature and level of EMEs' relationships with government.

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State Ownership Effect on Firms' FDI Ownership Decisions Under Institutional Pressure: A Study of Chinese Outward-Investing Firms

Lin Cui and Fuming Jiang

Introduction

Institutional theory has enriched our understanding of firms' international business strategies. Prior studies found that external institutional constraints and pressures can influence firms' strategic choices in foreign direct investment (FDI) (Brouthers, 2002; Chan & Makino, 2007; Meyer, Estrin, Bhaumik, & Peng, 2009; Yiu & Makino, 2002). Beyond the "top-down" effects (of institutions on organizations) that have dominated early studies (Scott, 2005), researchers also attempt to explore the role of firms in their institutional environments, and the subsequent heterogeneous firm responses to external institutional pressures (Kostova, Roth, & Dacin, 2008; Oliver, 1991).

When studying firm response to external institutional pressures, prior studies recognize firms as active agents that have the potential to reconstruct the rules and norms of their institutional fields (DiMaggio, 1988; Oliver, 1991; Scott, 2005). The basic premises of these studies are that firm self-interests may not align with those of the institutions, and that firms are driven by their self-interests to influence the institutional processes. While these assumptions apply to firms that are structurally separate from external institutions, they may not hold for firms that are themselves a part of the institutions and, in particular, state-owned enterprises (SOEs). SOEs are, by definition, assets of home-country governments, which makes them a part of their home-country institutions. Such an affiliation does not exempt firms from

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external institutional pressures; rather, it changes the nature of firms' responses to the pressures. For instance, while pursuing their business objectives, SOEs can be required to serve the political mandates of the state and align their interests with the home institutions rather than challenge these interests (Scott, 2002; Zhang, Zhou, & Ebbers, 2011). Because of SOEs' affiliation with the home institutions, when they invest overseas, they can be perceived by host-country institutions not simply as business entities, but also as political actors (Globerman & Shapiro, 2009; He & Lyles, 2008). Such a perception can pose challenges to SOEs' institutional processes in host countries (Luo & Rui, 2009; Peng, Wang, & Jiang, 2008). The political nature of the institutional processes that SOEs engage in is not captured by the existing theory, which views firms as active agents in their institutional environment (e.g., Oliver, 1991). SOEs as political affiliates are different from active agents, in that their responses to institutional pressures are motivated not solely by self-interests, but also by the interests of the institutions they are affiliated with. Existing theory does not adequately explain the influence of political affiliation on firms' responses to external institutional pressures.

In this study, we explore the role of state ownership in firms' institutional processes in home and host countries. Specifically, we examine the effect of state ownership on the strengths of external institutional pressures that influence firms' FDI ownership decisions. We focus on the firm's FDI ownership decision, as it is arguably one of the most important strategic decisions that firms face when conducting FDI. Firms make FDI ownership decisions by choosing between a joint ownership structure and a sole ownership structure in their foreign affiliates.[1] The result of this decision has long-term consequences and significant performance implications for firms (Brouthers, 2002; Brouthers & Hennart, 2007).

We advance a political perspective to examine the effect of state ownership on firms' FDI ownership decisions under home- and host-country institutional pressures. We argue that state ownership creates a political linkage between a firm and its home-country institutions that allows the firm to be resource dependent on the home institutions, and also influences the image of the firm as perceived by host-country institutions. Both the resource dependence and political image have consequences for the firm's response to external institutional pressures. A firm's conformity to institutional pressures is a function of external dependence (DiMaggio & Powell, 1983). The more a firm is dependent on the institution that exerts the pressure, the more likely it is that it will conform to, rather than resist, that pressure (Oliver, 1991). Firms also vary in their abilities to gain institutional legitimacy without being isomorphic. Firms that can create a positive image (as perceived by institutional constituents) about their internal routines, structures, and norms can gain legitimacy through negotiation (Kostova et al., 2008; Westney, 1993), whereas firms whose images are negatively perceived will be more subject

[1]A joint ownership structure is the result of either a partial acquisition or a greenfield joint venture. A sole ownership structure is the result of either a full acquisition or a wholly owned greenfield investment.

to isomorphic pressures, owing to the lack of an alternative legitimizing mechanism. Based on these consequences of political affiliation, we contend that state ownership can influence firms' responses to external institutional pressures – or, in other words, state ownership moderates the effects of external institutional pressures on firms' FDI ownership decisions.

We choose Chinese outward FDI as the empirical context to study the moderating effect of state ownership. The Chinese context provides two advantages for this study. First, although the Chinese economy has become increasingly diverse and plural (Rugman & Li, 2007; Tan & Tan, 2005), state-owned or -controlled firms remain the dominant force in the country's outward FDI (Chen & Young, 2010; Morck, Yeung, & Zhao, 2008). The prevalence of state ownership and the variation of the level of state ownership in individual Chinese firms allow us to capture its effect in firms' decision-making. Second, the institutional environment of Chinese outward FDI is dynamic and diverse, which makes it an ideal context to test our hypotheses. Chinese outward FDI spreads in over 170 countries with various institutional conditions. Moreover, the Chinese government's policies towards outward FDI change constantly (Luo, Xue, & Han, 2010), and that creates different home institutional pressures across time and across industries.

The main contributions of this study are twofold. First, it contributes to institutional theory and its application in international business research. Scott (2005) notes that institutional theory should be advanced from the prevailing top-down models of *institutional effect* towards an understanding of *institutional process* that incorporates both institutional influence and firm responses. Theoretical development is under way to explain heterogeneous firm responses to institutional pressures. Prior studies focus on firms that are structurally separate from institutions, which are able to make strategic responses (Goodrick & Salancik, 1996; Oliver, 1991) or even challenge the boundary of the institutional field (Kostova et al., 2008). Our study extends this theoretical development to firms that are structurally affiliated with institutions. Their abilities and willingness to influence or challenge the institutions can be hindered, owing to their resource dependence on the home-country government, as well as political liability in the host countries. Accordingly, we advance a political perspective to study the effect of state ownership on firms' responses to external institutional pressures.

Second, this study also contributes to empirical research on the internationalization of emerging-economy firms, especially those from China. The surge of Chinese outward FDI has attracted academic attention to investigate the characteristics of Chinese firms and their institutional environments that shape firms' internationalization strategies (Child & Rodrigues, 2005; Deng, 2009; Luo et al., 2010; Rui & Yip, 2008). An important feature of Chinese firms is state ownership (Chen & Young, 2010; Morck et al., 2008). Although the role of state ownership in the domestic operation and governance of Chinese firms has been extensively researched (Ding, Zhang, & Zhang, 2007; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008; Zou & Adams, 2008), limited attention has been paid to the role of state ownership in the internationalization of Chinese firms (Chen & Young, 2010). Our study addresses this research gap by revealing the role of state

ownership in Chinese firms' FDI ownership decisions. It provides new insights into the internationalization strategies of Chinese firms, which deviate from the predictions of existing theories.

Theoretical Framework

Institutional theory argues that social behavior and associated resources are anchored in rule systems and cultural schema (Scott, 2005). Institutions are defined as the "rules of the game", which include both formal (regulatory) and informal (normative and socio-cognitive) categories (North, 1990, Scott, 1995). In a given organizational field, the existing formal and informal rules determine the socially acceptable patterns of organizational structures and actions (DiMaggio & Powell, 1983). In order for a firm to gain legitimacy in its organizational field, it will have to adopt the business models, practices and structures established as a standard in the organizational field. Therefore, the isomorphic pressures of institutions can influence and constrain the strategic choices of firms (Davis, Desai, & Francis, 2000; DiMaggio & Powell, 1983; Lu, 2002).

Institutional theory has been applied in international business research to provide insights into the strategy–environment interaction in the international operations of firms (Meyer et al., 2009; Peng et al., 2008; Wright, Filatotchev, Hoskisson, & Peng, 2005). When conducting FDI, firms engage in institutional processes in both home and host countries (Rosenzweig & Singh, 1991, Xu & Shenkar, 2002). Firms are therefore subject to isomorphic pressures from home- and host-country institutional environments. Three types of external institutional pressures are highlighted in the literature. First, within the home country, firms are subject to the home government's regulatory restrictions on outward FDI. Home-country capital control for outward FDI is prevalent in emerging economies such as China (Cui & Jiang, 2010; Morck et al., 2008). Similar regulatory restriction may also re-emerge in advanced economies, as governments attempt to impose exit barriers in certain domestic industries (Peng et al., 2008). Second, when entering a foreign country, firms are subject to host-country regulatory restrictions on inward FDI. Governments around the world impose different degrees of restrictions on inward FDI to protect their domestic industries and national interests. While direct bans of inward FDI are increasingly rare (UNCTAD, 2005), restrictions on inward FDI still exists in various forms that discriminate against foreign investing firms (Meyer et al., 2009). Third, operating in a foreign country also exposes firms to normative pressures from host-country industries and stakeholders. Such pressures correspond with the extent to which the organizational field in a host country tolerates different norms exercised by foreign investing firms. Cultural distance and ethnocentricity can contribute to high host-country normative pressures on foreign firms (Mezias et al., 2002; Yiu & Makino, 2002). In summary, home regulatory, host regulatory and host normative institutions are the three main external institutions influencing the FDI strategic decisions of firms.

The institutional literature also highlights the factors internal to a firm that can moderate the institutional processes of the firm (DiMaggio, 1988; Scott, 2005).

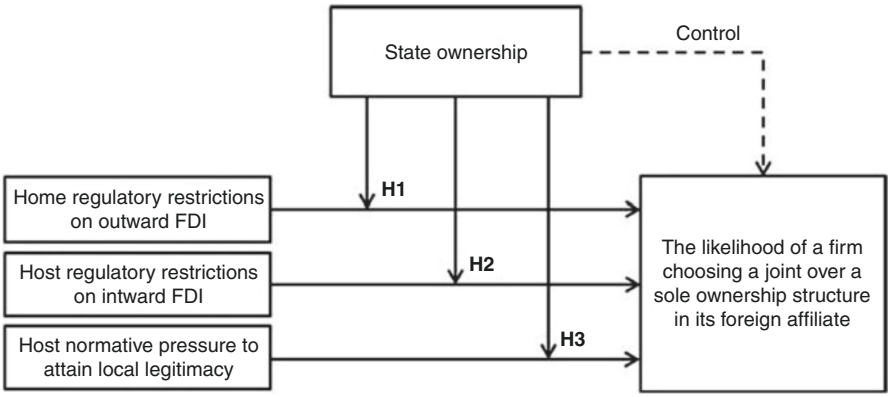

Fig. 1 State ownership effect on FDI ownership decisions

Beyond external institutional pressures, firms form internal institutions based on the internally accepted organizational routines, structures and standards (Kostova & Zaheer, 1999; Westney, 1993). For firms that are separate from the external institutions, their internal institutions and self-interests may conflict with the expectations of external institutions, which then lead to varied firm responses (Kostova et al., 2008). However, for firms that are affiliated with external institutions, their responses to external institutional pressures are less likely to be a function of conflicts of interests, but rather a function of the consequences of the political affiliation, namely their resource dependence on home institutions and the political image perceived by host-country institutions.

Based on the three types of external institutional pressures related to FDI, and the political consequences of state ownership, we propose a conceptual model that examines the effect of state ownership in the FDI ownership decisions of firms (Fig. 1). From a political perspective, we argue that state ownership increases the resource dependence of a firm on its home-country institutions, and negatively affects a firm's image-building process in host-country institutional environments. State ownership therefore moderates the effects of external institutional pressures on the FDI ownership decisions of firms.

Hypotheses Development

In this study, we focus on the moderating effect of state ownership on FDI ownership decisions under institutional pressures. Specifically, we examine whether state ownership will strengthen or weaken the effects of the three types of external institutional pressures on the choice of Chinese firms between a joint and a sole ownership structure in their FDIs. While we focus on the role of state ownership in firms' institutional processes, it may also influence firms' FDI strategies from other aspects, such as firm resource endowment and risk perception (Chen & Young, 2010; Rugman & Li, 2007; Yamakawa, Peng,

& Deeds, 2008). Such influences can be independent from external institutional pressures, and cause a direct effect of state ownership on FDI ownership decisions. Given the multifaceted nature of the state ownership effect, we first discuss its potential direct effect on the FDI ownership decisions of firms. From that basis, we then hypothesize the moderating effect of state ownership that influences firms' FDI ownership decisions under external institutional pressures.

Research on outward FDI from emerging economies has highlighted the important role of home-country governments in directing and supporting the internationalization activities of domestic firms (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007; Yamakawa et al., 2008). Government support can grant firms resource advantages in overseas investment to compensate for their lack of firm-specific advantages (Luo et al., 2010; Rugman & Li, 2007). Apart from the *received* government support (which is separately controlled for in this study), the *perceived* government backing also differentiates SOEs from other firms in terms of FDI strategic choices. When making strategic decisions, managers of SOEs may factor in the possibility that further supports, either formally or informally, will be available in unexpected adverse circumstances. Such managerial cognition influences decision-makers' risk perception, and leads managers to downplay the role of risks in outward FDI (Buckley et al., 2007). Risk perception has implications for firms' FDI ownership decisions (Ahmed, Mohamad, Tan, & Johnson, 2002). With perceived government backing combined with below-market cost of capital, SOEs are able to bear short-term loss while retaining full rights to future gains through sole ownership. Meanwhile, the risk-sharing benefits of joint ownership are accordingly devalued. As a result, a higher level of state ownership can increase the likelihood of sole ownership FDI.

An opposite direct effect of state ownership emerges from the political perspective. Prior studies have highlighted the political motivations in Chinese firms' FDIs (Globerman & Shapiro, 2009; Zhang et al., 2011). Being a part of the home-country institutions, SOEs may carry non-commercial objectives driven by the political interests of the state. These political objectives can influence firms' FDI ownership decisions. From the home-country aspect, the Chinese government encourages firms to engage in collaborative FDI to channel back natural, financial, and technological resources from foreign countries to the domestic economy (Buckley et al., 2007; Child & Rodrigues, 2005). A joint ownership structure is considered an efficient and effective way to achieve such objectives. From the host-country aspect, the state-driven objectives of Chinese SOEs are often perceived as non-beneficial, or even harmful, to the host country (Globerman & Shapiro, 2009). Consequently, the institutional barrier for Chinese SOEs to assume ownership and control in their investment in the host country will be high, which also increases the likelihood of a joint ownership FDI. Given the opposing effects discussed earlier, we control for the direct effect of state ownership in our analyses.

State Ownership and Home Regulatory Institutions

Like many other emerging economy governments, the Chinese government exerts regulatory restrictions on outward FDI to safeguard state assets, to prevent capital flight, and to direct outward FDI in line with national interests (Cui & Jiang, 2010; Deng, 2004; Luo et al., 2010). Such regulatory restrictions are implemented through an administrative system in which the Ministry of Commerce is authorized as the primary government organization responsible for the approval and administration of the outward FDIs of firms (Deng, 2004; Luo et al., 2010). The main purposes of this administrative system are to exercise capital control on outward FDI, and to direct the outward FDI activities of firms to adhere to the government's international investment strategies. For example, the government attempts to direct outward FDI to acquire foreign technology and natural resources. It also imposes restrictions on the use of foreign exchange, to prevent potential problems related to capital flight (Cui & Jiang, 2010). Outward FDI projects not in line with the government's international investment and foreign exchange policies can be rejected or delayed in the approval procedure, thus creating regulatory pressure that constrains the FDI strategic choices of firms.

The level of home regulatory restriction perceived by an individual firm is likely to vary, as the administrative system is evolving constantly over time and across industries to keep pace with the rapid development of China's outward FDI and industrial policy changes. The impact of a high level of perceived home regulatory restriction on a firm's FDI ownership decisions is twofold. First, it induces isomorphic pressure on firms to follow the practices that have been historically approved by the government. Specifically, during the 1990s, when Chinese outward FDI started emerging with significant volume, the administrative approval process had generally required firms to adopt the joint venture mode. As a result, the record shows that most of the FDI projects approved during that period were in the form of joint ventures (Buckley, Cross, Tan, Xin, & Voss, 2008; Taylor, 2002; Zhan, 1995). This is because, since the implementation of the "Open Door" policy in the early 1980s, the Chinese authorities had become familiar with the economic gains associated with the promotion of inward FDI in the form of joint ventures. Consequently, the government sought equivalent advantages of joint ventures (e.g., knowledge transfer, cost saving, and risk sharing) when Chinese firms invested abroad (Buckley et al., 2008; Wang, 2002).

Second, while all outward FDI projects are subject to government approval, projects that involve a substantial capital contribution from the Chinese side create greater concerns over capital flight and foreign exchange demands, and therefore are subject to more strenuous screening processes. Accordingly, it is relatively easier for a Chinese firm to obtain government approval if the proposed outward FDI is co-funded, ideally with Chinese equity in kind, than if it is fully funded by the Chinese investing firm. Therefore, when a Chinese firm perceives high levels of home regulatory restrictions on outward FDI, it is more likely to opt for a joint ownership structure in FDI in order to attain home regulatory approval.

While home regulatory restrictions constrain the strategic choices in firms' FDI, these restrictions can conflict with a firm's internal desires and self-interests, which leads to varied responses from firms. State ownership plays an important role in the responses of firms to home regulatory pressures, because it determines a Chinese firm's political affiliation and subsequently resource dependence on the home-country government, which intensifies the pressure on the firm to conform to home regulatory restrictions. Chinese firms with high levels of state ownership depend heavily on the home-country government for critical resource input and police supports. These firms, especially large SOEs, rely on their relational tie with the government to obtain monopolistic advantages in the home market (Rugman & Li, 2007), and to receive preferential support when they internationalize (Child & Rodrigues, 2005; Yamakawa et al., 2008). A firm's dependence on institutional constituents (in this case the home-country government) affects its response to institutional pressures. High dependence can increase the perceived salience of institutional pressure on firms to conform (Kostova & Roth, 2002). An organization is less likely to resist institutional pressure when it is dependent on the institutional constituents that exert that pressure (Pfeffer & Salancik, 1978). Acquiescence is the most probable response in this situation (Oliver, 1991). For Chinese firms, a high level of state ownership indicates a high level of resource dependence on the home-country government, and therefore increases a firm's tendency to conform to, rather than resist, home regulatory restrictions on outward FDI.

Hypothesis 1: State ownership moderates the effect of *home-country regulatory restrictions on outward FDI* on a firm's FDI ownership decision, in that the greater the share of equity held by state entities in the firm, the stronger the positive effect of perceived *home-country regulatory restrictions on outward FDI* on the likelihood of the firm choosing a joint ownership structure in its FDI.

State Ownership and Host Regulatory Institutions

Foreign investing firms are subject to the regulatory restrictions of host-country governments (Gatignon & Anderson, 1988; Gomes-Casseres, 1990). Host-country regulatory institutions apply formal laws, regulations and rules to foreign investors, to influence their FDI activities so as to safeguard national interests and maximize local benefits from inward FDI. Although most of the major economies in the world have abolished direct bans on inward FDI (UNCTAD, 2005), host-country regulatory restrictions still exist in other forms that may disadvantage foreign investors over host-country local firms. For example, foreign investors can be subject to various degrees of discriminatory and restrictive policies that impose difficulties in their acquiring ownership in FDI, limit their access to local resources, require mandatory exporting, and interfere with other operational matters (Meyer et al., 2009). Such regulatory restrictions from host-country institutions can disadvantage foreign investing firms when in competition with local firms.

Foreign investing firms need to establish market rights equal to those of local firms when facing regulatory restrictions from host countries. They can reduce their

exposure to host regulatory restrictions by forming joint ownership businesses with local firms. Research suggests that host regulatory institutions impose fewer restrictions on a joint ownership business than on an exclusively foreign-owned business (Brouthers, 2002; Yiu & Makino, 2002). A joint ownership structure can also facilitate foreign firms' dealing with the uncertainties involved in a host regulatory institutional environment, which may deteriorate or improve over time (Kogut, 1991; Li & Rugman, 2007). Prior studies supporting this argument found that regulatory pressure increases the likelihood of a joint ownership structure in FDI (Meyer, 2001; Padmanabhan & Cho, 1996; Yiu & Makino, 2002).

While host regulatory restrictions on inward FDI exert institutional pressure on foreign investing firms to opt for a joint ownership structure, state ownership within a Chinese firm can alter the response of the firm to this pressure. Chinese firms with concentrated state ownership are perceived by host-country institutions not only as business entities but also as political actors. As a result, these firms are under strict scrutiny by host-country regulatory institutions, especially in relation to their potential influences on the local economy of host countries. Chinese firms owned or controlled by the state are suspected of having political objectives that do not necessarily benefit the commercial interests of shareholders (Chen & Young, 2010; Zou & Adams, 2008). They can also be criticized for being heavily subsidized by the government, both directly and indirectly. As such, they are perceived by host regulatory institutions as a potentially negative economic force that may conflict with the business interests of local firms and distort business competition in the host country (Globerman & Shapiro, 2009; He & Lyles, 2008; Zhang et al., 2011). The political image associated with state ownership in Chinese investing firms can stimulate politically sensitive and public concerns in host countries, and provoke negative reactions from politicians and the public in the host countries.

While research suggests that firms facing institutional pressures can engage in political negotiation to establish a positive external image and thus attain legitimacy without having to conform to isomorphic pressures (Kostova et al., 2008), the negative political image of state ownership makes such negotiation processes extremely difficult, and at times impossible, to conduct. Host regulatory institutions are concerned with ideological and other political ramifications of Chinese investment with substantial state ownership, and such concerns can be amplified by public and media opinions (Zhang et al., 2011). As alternative legitimizing channels (e.g., negotiation) become less viable for the investing firms, any response other than conformity may lead to serious consequences from host regulatory institutions, such as rejection of entry or punitive taxes. In comparison with non-state-owned firms, which can explore alternative ways of obtaining legitimacy, state-owned firms suffer from negative political image, and are therefore more sensitive to host regulatory restrictions on inward FDI when making their FDI strategic choices.

Hypothesis 2: State ownership moderates the effect of *host-country regulatory restrictions on inward FDI* on a firm's FDI ownership decision, in that the greater the share of equity held by state entities in the firm, the stronger the positive effect of perceived *host-country regulatory restrictions on inward FDI* on the likelihood of the firm choosing a joint ownership structure in its FDI.

State Ownership and Host Normative Institutions

When conducting FDI, foreign investing firms are influenced by social expectations to act in a way that is deemed appropriate in the host countries. The logic of appropriateness is formed by a social collectivity that sustains a normative system with shared norms, values, beliefs, and culture (DiMaggio & Powell, 1983; Francis, Zheng, & Mukherji, 2009). To be socially legitimate, foreign investing firms need to understand and conform to the host country's normative system. Failure to do so can result in a liability of foreignness, which has negative consequences such as deteriorated social image, loss of brand value, and high costs in establishing business networks (Yiu & Makino, 2002; Zaheer, 1995). Firms are therefore under host-country normative pressure to attain local legitimacy. The level of such normative pressure may vary, depending on the degree to which the host country's normative system embraces or resists foreign cultures and practices, as well as the normative system distance between the host and home countries (Francis et al., 2009; Ghemawat, 2001).

Prior research outlines two reasons why a joint ownership structure is preferred in FDI under host-country normative pressure. First, normative pressure indicates potential social risk in FDI, as the foreign investing firm may become a victim of social stereotyping and differential standards (Kostova & Zaheer, 1999). Risk exposure of the foreign investing firm can be reduced by a joint ownership structure, where risk is shared among partner firms (Anderson & Gatignon, 1986; Hennart, 1991). Second, conforming to the isomorphic pressure to attain local legitimacy, foreign investing firms need to gain an understanding of the host country's normative system, and adjust their business practices accordingly. A local business partner can facilitate this learning process by bridging the normative system distance with its knowledge of the host country's practices and cultural norms. Overall, host-country normative pressure increases the likelihood of a joint ownership structure in FDI (Yiu & Makino, 2002).

Foreign firms can be more or less subject to host-country normative pressure to attain local legitimacy, depending on the perceived image of the firms by local constituents. A foreign firm can be less subject to host-country normative pressure if its distinct organizational practice and culture are valued and appreciated by local constituents (Kostova et al., 2008). State ownership, however, carries two specific political images that can have negative consequences for the image of a Chinese firm as perceived by host-country constituents. First, Chinese SOEs deliver the image of the state power of China, which sometimes overrides the business images of these firms. Research indicates that Chinese SOEs convey ideological and cognitive motivations such as "national pride" in the course of conducting their outward FDI (Hope, Thomas, & Vyas, 2011). In some host countries, the fact that many Chinese SOEs' FDIs are the results of intergovernmental negotiations

between the Chinese and host-country governments further demonstrates the state power image of the investing firms. The image of non-commercial objectives and unfair advantages makes it extremely difficult for the investing firm to create positive perceptions about its practice and culture that can be valued and appreciated by host-country constituents (Globerman & Shapiro, 2009; He & Lyles, 2008). Therefore, an image of state power compromises the viability of alternative legitimizing mechanisms other than isomorphic conformity.

Second, state ownership is also associated with the image of bureaucratic practice and inefficiency. A high level of state ownership leads to acute agency problems, owing to the separation of control and cash flow rights of owners (Zou & Adams, 2008). The cash flow rights of state ownership in Chinese firms rest with the central or local government. The control rights, however, are delegated to various government agencies (Delios, Wu, & Zhou, 2006). This separation of control and cash flow rights results in a lack of monitoring incentive from state owners. When state ownership is high in a firm, there tends to be no effective monitoring of managerial conduct (Chen & Young, 2010). Moreover, state ownership can influence the appointment of top management personnel in Chinese firms. For example, in firms with high levels of state ownership, governments usually appoint top management positions to former bureaucrats, who typically do not have professional business or management backgrounds (Firth, Fung, & Rui, 2007; Zou & Adams, 2008). Such managerial position arrangements reduce the operational efficiency of firms, and are detrimental to firm performance (Zou & Adams, 2008). Although an increasing number of Chinese SOEs are undergoing substantial transformation of their operations and management, the outcome is still not evident enough to change the general image of Chinese SOEs as perceived by host-country local constituents (He & Lyles, 2008). The bureaucratic image, combined with the lack of codified information, including reliable accounting data, makes the business operation of Chinese SOEs difficult to understand and appreciate from a foreign perspective (Zhang et al., 2011). Similarly, with the influence of the image of state power, the bureaucratic image associated with state ownership also compromises the viability of alternative legitimizing mechanisms. A Chinese investing firm with substantial state ownership would find it difficult to attain host-country legitimacy by creating a positive perception with local constituents alone. As non-conforming alternatives become less viable, the firm is more likely to conform to host-country normative pressure and dilute its foreign image by adopting host-country norms.

Hypothesis 3: State ownership moderates the effect of *host-country normative pressure to attain local legitimacy* on a firm's FDI ownership decision, in that the greater the share of equity held by state entities in the firm, the stronger the positive effect of perceived *host-country normative pressure to attain local legitimacy* on the likelihood of the firm choosing a joint ownership structure in its FDI.

Methods

Data Collection

In this study, we test our hypotheses in the context of Chinese outward FDI. We collected data from a survey conducted in 2006 targeting Mainland Chinese firms with outward FDI projects. The population was identified from the *2005 Statistical Bulletin of China's Outward Foreign Direct Investment* published by the Ministry of Commerce of China, which indicates that, by the end of 2005, there were approximately 5000 Chinese firms that had conducted outward FDI projects. A list of these outward-investing firms was kept confidential by the Chinese government, and was not accessible to the researchers. As a result, the names of outward-investing firms were collected manually from multiple sources published by central and provincial Chinese governments.[2] A total of 588 firms with full contact details were identified from these sources. We then designed and targeted our questionnaire for the top decision-makers in Chinese outward-investing firms. We required the respondent to be a senior executive who was directly in charge of his or her firm's outward investment activities at the time of the last FDI entry. In the questionnaire, we asked the respondent to reflect on the latest FDI entry of the firm, and answer all questions based on the time of that entry.

We followed a two-step procedure in our survey, to improve the response rate. In the first step, we conducted telephone pre-screening to identify one potential respondent from each firm who was the most influential decision-maker in the firm's latest FDI entry. We presented research information and institutional endorsement via facsimile, and also sought initial consent to participate from the potential respondents. Based on the information obtained from telephone pre-screening, the second step consisted in sending questionnaires to the potential respondents. Two rounds of reminders were subsequently sent to all potential respondents. We received 140 responses from the total of 588 questionnaires sent. As each response was based on a single

[2]Official sources consulted:

- 2004 and 2005 issues of *Annual Statistical Bulletin of Chinese Outward FDI* published by the Ministry of Commerce (both issues included lists of top 30 Chinese outward-investing firms ranked by their foreign assets and sales figures);
- lists of approved outward FDI projects by 2005 released by the municipal governments of Beijing and Shanghai, and the provincial governments of Fujian, Shandong, Jiangsu, and Zhejiang; and
- 2005 reports of outward FDI inspection released by the provincial governments of Guangdong and Heilongjiang.

All of these sources were publicly accessible in printed material or on government websites at the time of the survey.

FDI entry (and the latest entry at the time of the survey), no multilevel issue was involved in this study. Two responses were deemed unusable because the firms had entered into host countries that disallowed wholly owned foreign enterprises. We excluded these two cases, because the chosen FDI ownership structure was a coercive requirement rather than the outcome of firm decision-making. From the remaining cases, a further six were excluded as the FDI entries occurred prior to 2002, and we determined that there was a risk of bias, because the reference event was too distant in the past. As a result, our survey yielded 132 usable responses, which achieved an effective survey response rate of 22.45%.

We assessed the responsiveness of our sample based on the coverage of the sampling frame, the absence of non-response bias, and the consistency of our sample with the population on key distributional characteristics. Our sampling frame consisted of 588 Chinese outward-investing firms that were publically identifiable. These firms were top-ranking investing firms revealed in the central government's statistical bulletin, and those approved by eight eastern provinces that collectively contributed to more than 70% of the total outward FDI flow of China (MOFCOM, 2006). Altogether, these firms represented the major forces of Chinese outward FDI by the time of the survey.

We conducted survey non-response bias tests using both within-sample and out-of-sample methods. Following the extrapolation method of detecting non-response bias (Armstrong & Overton, 1977), we compared the early response group (the first 66 responses) and the late response group (the remaining responses) on key variables such as FDI ownership percentage, state ownership, size, age, and perceptions of institutional environment. No significant difference was found between the early and late response groups. To further detect self-selection bias, using Bureau van Dijk's ORBIS database we collected non-responding firms' information on firm size, ownership structure, and industry. We then compared the non-respondents with the respondents on these variables. Mean comparison *t*-tests did not return any significant results. We also followed Heckman's two-stage procedure and estimated a probit model of selectivity on identifying variables including firm size, state ownership, and industry dummies. None of the variables was significant, and the probit model was also non-significant. The Inverse Mills' ratio (lambda) calculated from this procedure was also non-significant when entered in subsequent analysis models. No evidence of self-selection bias was found in our data.

Lastly, we compared the industrial and regional distributions between the sample firms and the base population. Information about the population of Chinese outward-investing firms was obtained from the *Statistical Bulletin of China's Outward Foreign Direct Investment*, published by the Ministry of Commerce and National Bureau of Statistics of China (MOFCOM, 2006, 2009). As shown in Table 1, our sample distributions were largely consistent with the population.

Table 1 Sample firm and FDI location distribution, in comparison with population

Industrial distribution of investing firms					Regional distribution of FDI location				
	Manufacturing	Natural resource	Other	Asia	Europe	Africa	North America	Latin America	Oceania
Sample (N = 132) Number	78	15	39	68	20	15	18	6	5
Percentage	59.1	11.4	29.5	51.5	15.2	11.4	13.6	4.5	3.8
Population[a] Percentage	53.4	8.9	37.7	52.7	15.4	12.5	11.2	4.9	3.3

[a]Industry information was obtained from the official statistical bulletin of the survey year (MOFCOM, 2006; Table 6: 15). Location information was not released in early issues, and was obtained from MOFCOM (2009; Figure 14: 31).

Measurements

FDI Ownership Decision

Our dependent variable is the outcome of the firm's FDI ownership decision at the time of entry: that is, the initial ownership structure of the firm's foreign affiliate, where firms choose between a joint ownership structure and a sole ownership structure in their FDI. Following prior studies of FDI ownership decisions and entry mode choices (Hennart & Larimo, 1998; Lu, 2002; Makino & Neupert, 2000), we used an equity ownership share of 95% as the cut-off between joint ownership and sole ownership structures; the foreign affiliate has a *joint ownership structure* if the Chinese investing firm held <95% equity ownership in the foreign affiliate. We gave the dependent variable a value of 1 if the foreign affiliate had a joint ownership structure, and a value of 0 otherwise. Foreign affiliate ownership information at the time of entry was collected from our survey, and was cross-checked with secondary data.[3] Following the approach of prior studies (Chan & Makino, 2007; Hennart, 1991), we also used the *percentage of equity ownership* as an alternative measure of FDI ownership decisions in our robustness test models.

State Ownership

In this study, we hypothesize the moderating effects of *state ownership* while controlling for its direct effect. Following prior studies, we measured state ownership in a Chinese firm as the total percentage of equity ownership by the Chinese government and its agencies (Xu & Zhang, 2008; Zou & Adams, 2008). Specifically, following Delios et al.'s (2006) definition of "government owner", we calculated the total share of equity owned by local governments, government ministries, government bureaus, industry companies,[4] state asset investment bureaus, state asset management bureaus, state-owned research institutes, and state-owned banks. These owners are ultimately controlled by local, provincial, or national-level governments in China (Delios et al., 2006). Sample firms' ownership data were collected from Bureau van Dijk's ORBIS database.

Institutional Pressures

Prior studies have used two types of measurements for institutional variables: archival index measures (Meyer et al., 2009; Yiu & Makino, 2002) and survey-based perceptual measures (Brouthers, 2002; Davis et al., 2000; Kostova & Roth, 2002; Santangelo & Meyer, 2011). In this study, we developed perceptual

[3]We also collected foreign affiliate ownership information from Bureau van Dijk's ORBIS database. Data were collected from ORBIS backup DVDs for the year of entry, to ensure that the data reflect the firms' ownership decision at the time of entry. We did not find major inconsistency between our survey data and ORBIS data that would change the dichotomous coding of our dependent variable.

[4]Most so-called "industry companies" in China were central or local government ministries before China's economic reform initiated in 1978. They are fully state-owned, and typically are run by former government officials.

measures, for three reasons. First, Kostova and Roth (2002) suggest that when studying dynamics between institutions and organizations, the measures for institutional variables should be anchored in the specific organizational practice under investigation, because institutional categories are domain or issue specific. The specific issue examined in this study is the firm's FDI ownership decision. However, most archival indices (e.g., Heritage Foundation's Economic Freedom Index and the World Competitiveness Indices) measure the general legal and cultural environments of countries rather than those specific to FDI. Second, archival index measures have limitations in regard to their usability. Not all archival indices are updated on a continuous and frequent basis. Missing data and inconsistency in index definitions can create limitations on the usability of archival index measures (Meyer et al., 2009). In our study, we could not access a reliable archival source of Chinese outward FDI, and were unable to obtain an index measure on the home-country regulatory restrictions on outward FDI. Third, survey-based measures have their own limitations, as they are less objective than archival index measures, and may lead to a common method variance problem. However, researchers argue that the subjectivity of perceptual measures can also be an advantage, because it is the decision-makers' views of their environment that influence their decision-making process (Santangelo & Meyer, 2011). Moreover, in our study the perceptual nature of survey-based measures did not pose a significant concern about common method, because our dependent variable is factual rather than perceptual. Based on these three reasons, we considered the approach of using perceptual measures more appropriate than using archival index measures in our study.

Three institutional variables are included in this study: home-country regulatory restrictions on outward FDI (*home regulatory pressure*), host-country regulatory restrictions on inward FDI (*host regulatory pressure*), and host-country normative pressure to attain local legitimacy (*host normative pressure*). We developed measures of institutional pressures following a three-step procedure similar to the approach of Kostova and Roth (2002). In the first step, we generated measurement items of home regulatory, host regulatory, and host normative pressures in relation to FDI ownership decision-making. A total of 25 items were adapted from prior studies of FDI ownership decisions, FDI entry mode choice, and Chinese outward FDI. In the second step, we gave a random list of these items to five managers in a pilot study, and asked them to sort the items into the three categories of institutional pressures. We compared the sorting results from these five individuals and excluded the items that appeared across all three categories, in that they were least consistently sorted. We then repeated the process with another three managers, and this time retained only items that achieved perfect matches among the three sorters. Fourteen items were retained and included in the survey questionnaire. The last step involved a principal component analysis (PCA) on the 14 items obtained in the previous step. As expected, the PCA, using our survey data, returned a three-factor solution. We removed items with low factor loadings (<0.4) and low item-to-total correlations ($r < 0.25$). Nine items remained after this step. The final scales are presented in Table 2. To assess the measurement

Table 2 Institutional pressure constructs

Constructs	Measurement items on 5-point Likert scale	Factor loading	Source of adapted items
Home regulatory pressure (α = 0.73)	1. The home-country government's official approval procedure favors joint ownership over sole-ownership-based outward FDI projects	0.86	Deng, 2004, 2009; Liu et al., 2005; Luo et al., 2010
	2. Firms are more likely to receive foreign exchange approval from home-country authorities if the proposed outward FDI is jointly rather than solely funded	0.89	
Host regulatory pressure (α = 0.92)	1. There are legal restrictions on FDI in the host country	0.93	Anderson and Coughlan, 1987; Bell, 1996; Brouthers, 2002; Kim and Hwang, 1992
	2. Host-country government constrains foreign firms' operations by instituting restrictive policies	0.92	
	3. Host-country laws and regulations discourage foreign firms from making equity-based market entries (i.e., FDI)	0.91	
Host normative pressure (α = 0.75)	1. In the host country, foreigners are treated unequally compared with native citizens	0.79	Ekeledo and Sivakumar, 2004; Francis et al., 2009; Yiu and Makino, 2002
	2. There is a social preference for local over foreign businesses in the host country	0.85	
	3. The professional standard in the host-country industry is different from that in the home-country industry	0.69	
	4. The way of doing business in the host country is different from that in the home country	0.66	

validity of the scales, we collected secondary host-country data on political constraints and cultural distance (between the host country and China). We found high correlations between our measure of host regulatory pressure and the Political Constraint Index (Henisz, 2000) on "political constraints" ($r = 0.74$) and "executive political restriction" ($r = 0.68$). We also found a mild but significant positive correlation between our measure of host normative pressure and the cultural distance of host country from China ($r = 0.35$), calculated following Kogut and Singh (1988).

As shown in Table 2, *home regulatory pressure* was measured by two items reflecting a firm's perceived pressure to adopt a joint ownership structure in relation to home-country institutional procedures. The two items were related to outward FDI approval and foreign exchange approval procedures, respectively ($\alpha = 0.73$). Both items were cleanly loaded on one factor. These two home-country institutional procedures are highlighted in recent studies of Chinese outward FDI (Deng, 2004; Liu, Buck, & Shu, 2005; Luo et al., 2010). *Host regulatory pressure* was measured by three items describing host-country policy pressure on inward FDI, foreign firm operation, and equity-based market entry ($\alpha = 0.92$). These three items were cleanly loaded on one factor. All three items were informed by prior studies of FDI ownership decision and entry mode choice using survey methods (Bell, 1996; Kim & Hwang, 1992). *Host normative pressure* was measured by four items, with the first two related to host-country social attitudes towards foreigners and foreign business, and the second two related to the investing firm's unfamiliarity with host-country professional norms and ways of doing business ($\alpha = 0.75$). All four items had fairly high (above 0.60) loadings on one common factor. These items were adapted from prior studies that discuss cultural distance and normative system differences (Francis et al., 2009; Yiu & Makino, 2002).

Control Variables

We controlled for several variables relating to firm capability, host industry, and transaction cost. *Firm size* indicates a firm's capability of making resource commitments in outward FDI (Agarwal & Ramaswami, 1992). We measured firm size using the log of the firm's global sales (in million renminbi) in the year prior to FDI entry. The *experience* of doing business overseas influences a firm's perceived risk and uncertainty in conducting FDI, as well as its willingness to commit resources (Anderson & Gatignon, 1986; Brouthers, 2002). Experience was measured by the log-transformed number of years between the firm's first FDI entry and the focal entry reported in the survey. A Chinese firm's ability to conduct FDI is also influenced by the amount of *government support* received by the firm. Reflecting the three main types of government support identified by Luo et al. (2010), this variable was measured by three items ($\alpha = 0.82$) related to the levels of government financial, information, and diplomatic supports received by a firm for its outward FDI. *Host industry competition* also influences the perceived risk of resource commitment in outward FDI. We measured this variable by using three items ($\alpha = 0.83$) related to the perceived number of competitors, competition intensity, and competition-induced entry barriers of host-country industries (Bell, 1996; Kim & Hwang, 1992). *Host market potential* can motivate a foreign investor to pre-empt the market and make long-term commitments. This variable was measured on two items ($\alpha = 0.70$) related to the host-country market growth rate and future growth potential (Bell, 1996; Brouthers, 2002). We also controlled for industry effects that may influence a firm's FDI ownership decision. Prior studies generally use a dummy variable to differentiate between manufacturing and nonmanufacturing firms (Brouthers, 2002; Kogut & Singh, 1988), and so, following this practice,

we included two dummy variables to control for the effects of *manufacturing industry* and *natural resource industry*. Lastly, *research and development (R&D) intensity* of a firm can increase the specificity of the firm's technological assets, and expose it to the risk of partner opportunism. Firms may need to adopt a sole ownership structure in FDI to preclude this risk (Anderson & Gatignon, 1986). Following Kim and Hwang's (1992) study, we measured R&D intensity, in comparison with major competitors, using a single survey item.

Analysis and Results

Descriptive Statistics and Correlations

The sample of analysis included FDI entries reported by 132 Chinese outward-investing firms. Each firm reported its latest FDI entry up until 2006, which resulted in a sample of 132 independent FDI entries. Among these 132 firms, 53 had no state ownership, 36 were partially state-owned, and 43 were fully state-owned. The average share of state ownership in the sample firms was 45.38%. In terms of industry distribution, 78 firms were manufacturing firms, 15 were in natural-resource-related industries, and the remaining 39 were from other industries, particularly the service industry. Among the 132 FDI entries included in the sample, 52 used a joint ownership structure and 80 used a sole ownership structure. Within the 52 joint ownership cases, the Chinese investing firm had a minority ownership in 11 cases, an equal (50–50) ownership in 10 cases, and a majority ownership in 31 cases. The average share of Chinese ownership in the 132 FDI entries was 82.98%. Some significant correlations were observed between dependent and exploratory variables (see Table 3). The dummy variable *joint ownership structure* was positively correlated with the three institutional pressure variables, and negatively correlated with *firm size, government support*, and *host industry competition*. There were also some significant correlations between exploratory variables, but none of these was of a considerable magnitude. The descriptive statistics and variable correlations are reported in Table 3.

Hypothesis Test Using Logistic Regression

Our dependent variable was given a value of 1 if the focal FDI entry was of a joint ownership structure, and a value of 0 if it was of a sole ownership structure. Accordingly, we performed binary logistic regression analysis to test our hypotheses. We employed different models to test the direct effect hypotheses and moderating effect hypotheses, respectively (see Table 4). In our logistic regression models, a positive regression coefficient means that an increase in the value of the explanatory variable leads to a greater likelihood of the firm's choosing a joint ownership structure over a sole ownership structure in its FDI. Following our hypotheses, we expected state ownership to have a significant negative regression coefficient, and its interactions with institutional pressures to have a significant positive regression coefficient.

Table 3 Descriptive statistics and Pearson correlations

	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. FDI ownership (%)	82.98	24.26	1.00														
2. Joint ownership structure	0.39	0.49	−0.85***	1.00													
3. Firm size	7.66	0.97	0.20*	−0.20*	1.00												
4. Experience	0.44	0.82	0.08	−0.06	0.36***	1.00											
5. Government support	2.58	0.84	0.23**	−0.30***	0.02	0.09	1.00										
6. Host industry competition	3.31	0.73	0.21*	−0.18*	0.07	−0.06	0.23**	1.00									
7. Host market potential	3.55	0.62	−0.22*	0.17	0.09	0.05	0.13	0.07	1.00								
8. Manufacturing industry	0.59	0.49	−0.07	0.04	0.03	0.04	−0.08	−0.04	−0.09	1.00							
9. Natural resource industry	0.11	0.32	0.04	0.00	0.01	0.09	0.11	0.05	0.09	−0.43***	1.00						
10. R&D intensity	3.02	0.93	−0.09	0.06	0.10	0.04	−0.06	−0.10	0.04	0.04	−0.03	1.00					
11. Host regulatory pressure	2.38	0.85	−0.27**	0.27**	−0.23**	−0.16	0.06	−0.20*	−0.08	−0.01	0.03	−0.10	1.00				
12. Host normative pressure	2.56	0.78	−0.14	0.20*	−0.13	−0.04	0.08	0.15	0.04	−0.07	0.02	−0.04	0.24**	1.00			
13. Home regulatory pressure	3.34	1.03	−0.41***	0.33***	−0.05	0.15	−0.17	−0.12	0.10	0.08	−0.07	−0.00	0.13	0.02	1.00		
14. State ownership (%)	45.38	45.30	−0.09	0.07	0.06	−0.03	−0.01	−0.04	0.07	0.00	−0.02	0.08	0.16	−0.17*	−0.02	1.00	
15. State-owned enterprise	0.46	0.50	−0.11	0.12	0.03	−0.07	−0.04	−0.08	0.07	0.03	0.00	0.04	0.10	−0.17*	0.02	0.96***	1.00

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 4 Logistic regression of FDI ownership structure

DV: Joint = 1, Sole = 0	Model 1.0	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5
Constant	−0.52	−0.51	−0.48	−0.38	−0.47	−0.47
Control variables						
Firm size	−0.48*	−0.32	−0.34	−0.55†	−0.33	−0.44
Experience	0.05	−0.06	−0.03	−0.07	−0.22	−0.39
Government support	−0.71**	−0.94***	−0.90**	−0.89**	−0.95***	−0.74*
Host industry competition	−0.26	−0.24	−0.22	−0.35	−0.39	−0.64*
Host market potential	0.43*	0.58*	0.57*	0.46†	0.61*	0.63*
Manufacturing industry	0.14	0.13	0.13	0.26	−0.09	0.03
Natural resource industry	0.14	0.17	0.13	0.26	0.17	0.13
R&D intensity	0.11	0.21	0.24	0.38	0.33	0.39
Institutional pressures						
Home regulatory pressure (Home)		0.72**	0.78**	0.59*	0.60*	1.36*
Host regulatory pressure (Host)		0.67*	0.64*	1.21**	0.57*	1.47*
Host normative pressure (Norm)		0.62*	0.44	0.47†	1.04**	2.00*
Moderator						
State ownership		0.36	0.39	0.34	0.37	0.29
Interactions						
Home × State ownership			0.63*			1.66*
Host × State ownership				1.38**		1.75*
Norm × State ownership					1.18**	2.51**
Observation (*N*)	132	132	132	132	132	132
Log likelihood	−75.61	−61.93	−59.31	−53.90	−54.67	−42.58
Likelihood ratio χ^2 test	25.78**	53.16***	58.39***	69.21***	67.67***	91.85***
AIC	169.23	149.85	146.62	135.79	137.34	117.16
Classification hit-rate (%)	68.94	81.06	81.06	81.06	79.55	84.09

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

A baseline model (Model 1.0) included only the control variables. The model was significant at a level of 0.01, and yielded an Akaike's information criterion (AIC) of 169.23, the highest among alternative models. This baseline model correctly predicted 68.94% of the cases, which was a 16.69% improvement from random selection. This was below the expected 25% improvement in classification hit rate.

Model 1.1 included the direct effect of state ownership and firm-perceived institutional pressures. The model was significant at the 0.001 level, and showed significant improvement in model fit over the baseline, as evidenced by reduced AIC and a much improved classification hit rate. The effect of state ownership was non-significant ($p = 0.138$), which could be a result of the opposing effects discussed before. The model returned positive effects of institutional pressures and negative effects of government support. We conducted additional tests to see if these significant results were due to potential endogeneity problems associated with *state ownership*. Endogeneity problems occur when certain exploratory variables are potentially affected by other variables. In our study, state ownership may affect the focal firm's choice of FDI location. Due to their political liabilities, firms with high levels of state ownership may intentionally avoid host countries with high regulatory and normative pressures. Moreover, firms with high levels of state ownership may receive more government support than other firms. Accordingly, *host regulatory pressure, host normative pressure*, and *government support* may be endogenous to *state ownership*. To test these endogeneity problems, we estimated probit models with endogenous regressors using instrumented variable methods. Three models were estimated, where *host regulatory pressure, host normative pressure*, and *government support*, respectively, were instrumented by *state ownership*. The models returned nonsignificant estimated ρ, indicating that there were no endogeneity issues, and thus our original model (Model 1.1) should be used.

Models 1.2–1.5 tested the hypothesized moderating effects of *state ownership*. All of these models were significant at the 0.001 level, had smaller AICs than the baseline model, and had >25% improvement in model classification hit rate from random selection. All of the interaction terms, either independently (Models 1.2, 1.3, and 1.4) or collectively (Model 1.5), had positive coefficients that were statistically significant. The interaction of *home regulatory pressure* and *state ownership* was positive and significant in Model 1.2 ($p = 0.032$) and in Model 1.5 ($p = 0.015$). These results suggest that the greater the share of equity held by state entities in a Chinese firm, the stronger the effect of home-country regulatory restrictions on outward FDI on the firm to choose a joint ownership structure over a sole ownership structure in its FDI. Our Hypothesis 1 was therefore supported. The interaction of *host regulatory pressure* and *state ownership* was positive and significant in Model 1.3 ($p = 0.002$) and in Model 1.5 ($p = 0.010$). These results suggest that the greater the share of equity held by state entities in a Chinese firm, the stronger the effect of host-country regulatory restrictions on inward FDI on the firm to choose a joint ownership structure over a sole ownership structure in its FDI. Hypothesis 2 was therefore supported. Also, as expected, the interaction of *host normative pressure* and *state ownership* was positive and significant in Model

1.4 ($p = 0.001$) and in Model 1.5 ($p = 0.004$). These results supported Hypothesis 3, which states that the greater the share of equity held by state entities in a Chinese firm, the stronger the effect of host-country normative pressure on the firm to attain local legitimacy by choosing a joint ownership structure over a sole ownership structure in its FDI.

Robustness Check Using Tobit Regression

To check the robustness of our models, we followed prior studies that measure the outcome of FDI ownership decisions as a continuous variable using the *percentage of equity ownership* (Chan & Makino, 2007; Hennart, 1991). We estimated Tobit regression models (see Table 5), because the dependent variable is censored (minimum 10%, maximum 100%). For consistency with previous models and ease of interpretation of results, we reversed the *percentage of equity ownership* held by the Chinese investing firm as the dependent variable.

Model 2.1 tested the main effect of *state ownership* and *institutional pressures* on FDI ownership. Consistent with our logistic regression results (Model 1.1), *state ownership* remained non-significant, while the three institutional variables all had positive effects as expected. We also found support for our moderating hypotheses across Models 2.2–2.5. All models fitted well (χ^2 test $p = 0.000$) and had reduced AIC compared with the main effect model (Model 2.1) when interaction terms were added. In Model 2.2, the interaction of home regulatory pressure and state ownership was positive, as was expected, but was, however, non-significant ($p = 0.138$). This result suggests that although a high level of home-country regulatory restrictions on outward FDI influences a firm to reduce equity ownership in its FDI, this influence does not vary significantly by state ownership in the firm. Therefore, Hypothesis 1 was unsupported when FDI ownership structure was measured by the quantity of equity ownership rather than by the type of ownership structure. In Models 2.3 and 2.4, the interaction terms were positive and significant; suggesting that a greater share of equity held by state entities in a firm strengthens the effects of *host regulatory pressure* and *host normative pressure* on the firm to sacrifice ownership for legitimacy, which supported Hypotheses 2 and 3. In general, except for the moderating effect on home regulatory pressure, our logistic regression and Tobit regression models showed consistent results.

Furthermore, we used *SOE dummy* instead of *state ownership* (percentage) as the moderator to test the robustness of our models. Using a categorical rather than a continuous measure is in line with prior studies, which suggest that ownership type moderates environment–strategy configuration in the context of an emerging economy (Peng, Tan, & Tong, 2004; Tan & Li, 1996). To obtain the value of this dummy variable, we used Bureau van Dijk's ORBIS database to identify the ultimate owner of a firm. The dummy variable was coded 1 if the ultimate owner of the firm was the Chinese government or its agencies, and 0 if otherwise. We used *SOE dummy* in both logistic regression and Tobit regression models, and found consistent results for the direct effects of institutional pressures and moderating effects of *SOE dummy*. However, we observed a decrease in significance

Table 5 Tobit regression of FDI ownership structure

DV: reversed equity ownership (%)	Model 2.0	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5
Constant	−5.70	−4.72	−4.31	−2.14	−3.74	−1.57
Control variables						
Firm size	−10.01*	−6.46	−6.74	−9.68*	−6.93	−9.90*
Experience	−2.01	−3.23	−2.40	−2.12	−3.84	−1.91
Government support	−13.46*	−12.01**	−10.30*	−8.88*	−10.83*	−6.79
Host industry competition	−7.21	−4.01	−3.63	−5.08	−4.76	−5.10
Host market potential	9.26*	6.82†	6.28†	5.21	7.03†	5.06
Manufacturing industry	3.81	2.94	3.12	4.94	0.97	3.51
Natural resource industry	1.26	1.56	1.52	3.50	0.73	2.63
R&D intensity	2.37	3.42	3.03	4.64	3.44	3.87
Institutional pressures						
Home regulatory pressure (Home)		13.93**	12.99**	9.78*	10.49*	7.30†
Host regulatory pressure (Host)		10.72*	9.51*	10.94**	9.33*	8.75*
Host normative pressure (Norm)		7.57	5.24	5.18	7.74†	3.86
Moderator						
State ownership		3.56	2.78	0.75	2.88	0.14

Table 5 continued

Interactions						
Home × State ownership			6.51			5.88
Host × State ownership				15.72***		13.36**
Norm × State ownership					10.98**	7.97†
Observation (*N*)	132	132	132	132	132	132
Log likelihood	−333.34	−319.38	−318.25	−312.25	−316.07	−309.54
Likelihood ratio χ^2 test	25.78**	53.71***	55.95***	67.97***	60.31***	73.38***
AIC	686.68	666.75	666.51	654.49	662.14	653.08
Pseudo R^2	0.037	0.078	0.081	0.098	0.087	0.106

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

level of some institutional pressure variables and interaction terms, which suggests that our models are more valid in testing the effects of the share of equity held by state entities in a firm than the dichotomous SOE status of the firm.

Discussion

This study aims to advance institutional theory and its application in international business research. It addresses the broad research question "What factors cause the heterogeneous firm responses to external institutional pressures?". Existing research presents a gap in this theoretical enquiry, as the focus has been exclusively on firms that are structurally separate from external institutions (e.g., multinational firms from advanced economies; see Kostova et al., 2008). Firms that are part of the external institutions (e.g., state-owned firms, especially those from emerging economies) respond to external institutional pressures in a different manner, which has not been systematically examined in the literature. From a political perspective, we extend the current research on firm responses to institutional pressures by investigating the role of state ownership in the institutional processes of firms that are part of the external institutions. State ownership can influence the institutional processes of a firm in the home country by determining the political relationship with, and resource dependence on, the home-country institutions, and in the host country by creating a political image that changes the perception of the firm by host-country institutions. These political consequences are particularly evident in the recent surge of outward FDI from emerging economies, especially the institutional challenges faced by Chinese SOEs (Globerman & Shapiro, 2009; He & Lyles, 2008; Zhang et al., 2011). Using the empirical context of Chinese outward FDI, this study tests the moderating effect of state ownership in firms' FDI ownership decisions as responses to home- and host-country institutional pressures.

Main Arguments and Findings

Institutional theory argues that firms are under institutional pressure to adhere to the formal and informal rules in their institutional fields, and to become isomorphic (DiMaggio & Powell, 1983; Scott, 1995). Firms vary in their responses to the institutional pressures, for two reasons. First, firm response can be dependent on the firm's resource dependence on the institution that exerts the pressure (Oliver, 1991). With a high resource dependence, a firm is more likely to conform to the institutional pressures to avoid negative consequences (Pfeffer & Salancik, 1978). From a political perspective, we argue that state ownership can strengthen the home-country institutional influence on firms' strategic choices, because state-owned firms are politically affiliated with the home-country government, and are highly dependent on the home-country institutions for critical resource inputs. Second, firm response can also vary, depending on the viability of alternative mechanisms of legitimizing, without having to be isomorphic. Firms that are able to create positive perceptions from institutional constituents are more likely to be

accepted for being different, and therefore are less subject to isomorphic pressures (Kostova et al., 2008). From a political perspective, we argue that state ownership strengthens the effects of host-country institutional pressures, because it creates negative images of the investing firm, which compromises the viability of alternative legitimizing mechanisms and magnifies the negative consequences of non-conforming responses.

Using survey data on Chinese firms' FDI entries from 2002 to 2006, we empirically tested the effects of state ownership on firms' FDI ownership decisions under institutional pressures. We controlled for the direct effect of state ownership on outward FDI ownership decisions, which was non-significant. The non-significant results could be due to the opposing effects of state ownership from the resource and political perspectives. As state ownership can be both a resource advantage and a political liability, its direct effect on firms' FDI ownership decisions maybe multidimensional. While controlling for the direct effect, we tested the moderating effects of state ownership on the relationships between external institutional pressures and the likelihood of a firm's choosing a joint ownership structure in its FDI. Consistent with prior studies, our results suggest that firms under high levels of external institutional pressures (including home-country regulatory restrictions on outward FDI, host-country regulatory restrictions on inward FDI, and host-country normative pressures to attain local legitimacy) are likely to opt for a joint ownership structure to attain institutional legitimacy and mitigate institutional costs (Chan & Makino, 2007; Lu, 2002; Yiu & Makino, 2002). The positive effects of institutional pressures on a joint ownership structure were stronger when the share of equity held by state entities in a firm was high. The moderating effects were also significant when state ownership was measured as a dummy variable separating SOEs from non-SOEs, in that the effects of institutional pressures were stronger for SOEs than for non-SOEs. Based on these results, we found substantial support for our hypotheses.

Research Implications

This research has sought to advance a political perspective to explain the interaction between firms and their institutional environments in international operations. It contributes to the development of institutional theory in organizational research from an earlier focus on the *topdown* models of institutional effects toward more *interactive* models of institutional processes (Scott, 2005). When explaining the variations in firms' responses to external institutional pressures, prior studies mainly take an agentic perspective that highlights what a firm can do to pursue self-interests under institutional pressures (DiMaggio, 1988; Oliver, 1991). However, researchers also note that strategic responses from agentic actors may not be viable in certain institutional fields (Goodrick & Salancik, 1996); in other words, what a firm can do depends on the dynamics of the institutional field where the firm belongs. A firm can be separate from or affiliated with the external institutions in its institutional field, and the separation or affiliation will have

consequences for the viability of the firm's strategic responses. For example, a strong affiliation with a home-country state may lead host-country constituents to view a foreign investing firm as an agent of a foreign state, and thus reduce the viability, or increase the difficulty, of alternative legitimizing efforts of the firm. It is therefore the interaction of institutional pressure and institutional affiliation that influences firm decisions.

This study also advances our understanding of the internationalization strategy of Chinese firms. Although the phenomenal growth of Chinese outward FDI has attracted increasing academic attention (Child & Rodrigues, 2005; Morck et al., 2008), there is a lack of understanding of the role of state ownership in the internationalization of Chinese firms, despite the fact that it can be an important parameter in explaining the deviation of Chinese firms' FDI strategies from existing theoretical predictions. We suggest that the effect of state ownership on Chinese firms' FDI ownership decisions is multifaceted. From a resource perspective, it can increase a firm's risk tolerance, owing to perceived government backing. From a political perspective, state ownership can create institutional barriers for a firm to assume ownership and control in its FDI. While the direct effect of state ownership is complicated by opposing effects from the resource and political perspectives, our findings support that state ownership can make a firm more subject to external institutional pressures, and thus strengthen their effects on the firm's strategic choices.

From a managerial standpoint, our study suggests that firms need to take their political affiliations into account when formulating FDI strategies. While the literature has discussed the image management issues of multinational firms in general (Collinson & Morgan, 2009), the political images associated with state ownership present a challenge at the group level, which accordingly requires group-level solutions. For example, negative publicity for an individual SOE can easily lead to a negative stereotype from public media, which may compromise the image-building efforts of other SOEs. To change the host-country perception, SOEs need to engage in a consistent and coordinated image-building process that maximizes the benefits of individual firm efforts. The home-country government may play the coordinating role in identifying the key efforts at host country, regional and global levels, and prevent free-riding attempts of individual firms.

Limitations and Future Research Directions

We identify several limitations of this study, which lead to future research directions. First, in this study we measured state ownership as a continuous variable. The measure has its limitations, as it does not capture certain qualitative differences in firm ownership structures and associated image perceptions. For example, a fully state-owned firm can be viewed by host-country constituents as a pure agent of the Chinese state, which is categorically different from a firm with majority state ownership, and thus subject to institutional expectations of another organizational field. In that case, the effect of state ownership may be not only on

a firm's response to institutional pressures, but also on the strength and nature of the institutional pressures themselves. Moreover, state ownership is a multidimensional phenomenon. State ownership can be divided, based on the levels of government association (e.g., central state, provincial, and local government ownerships). Research also suggests that the type of state ownership holding entity (e.g., state companies vs. state asset management bureaus) can have different governance effects on firms, and consequently can influence firms' strategy and performance outcomes (Chen, Firth, & Xu, 2009). In future research, we propose a more nuanced investigation of state ownership that simultaneously takes into account the non-linear and qualitative difference in the state share of equity, the level of government association of state ownership, and the type of state ownership holding entity.

Second, this study has limitations in its measurement of institutional variables. In this study, we developed survey-based measures for the three institutional pressure variables. This approach is advantageous, in that researchers can develop issue-specific measures of institutional variables without being constrained by archival data availability. The disadvantage is the loss of a certain degree of objectivity and comparability of findings across studies. This approach also prevents researchers from using self-reported dependent variables (e.g., perceived success of focal FDI entry), owing to potential common method variance problems. Future research could develop more objective measures based on factual rather than perceptual information.

Third, this study has its limitations in terms of sampling. Although our theoretical arguments are applicable to a wider range of emerging economies, a single home-country sample does not fully demonstrate that potential. While a single home-country design can capture the variations of home regulatory pressure across industry, time and firm type, it does not allow us to observe the variations across different home-country environments. Also, our sampling is based on official sources, which do not capture the Chinese firms that are able to circumvent the official approval procedures of the home country (Cai, 1999). While the volume and characteristics of these unregistered FDI entries are largely unknown, it can be expected that these firms possess certain capabilities that enable them to escape from home-country institutional procedures, which may also influence how they respond to institutional pressures overseas. To address these sampling limitations, future research could employ a multicountry and multisource sampling strategy to provide more generalizable findings.

Finally, as for all quantitative empirical research, this study has limitations in its ability to fully reveal the processes behind statistically significant relationships. Specifically, our focus is to reveal the role of state ownership in moderating the effects of external institutional pressures. Our theoretical arguments center on the political affiliation of SOEs and its consequences. Our data do not allow us to fully disclose the bargaining process of SOEs with their home-country government, and their legitimizing efforts and failures in host countries. The investigation of these underlying processes warrants a qualitative design utilizing richer case evidence.

Qualitative research based on rich and thick process descriptions can better appreciate the complexity of the issue from multiple, and possibly complementary, theoretical lenses (Doz, 2011). We propose that future research should employ a case study method to deepen our understanding of the role of state ownership in firms' institutional processes.

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Toward Resource Independence – *Why* State-Owned Entities Become Multinationals: An Empirical Study of India's Public R&D Laboratories

Prithwiraj Choudhury and Tarun Khanna

Introduction

In this paper, we build on standard resource dependence theory (RDT) (Pfeffer & Salancik, 1978) and its departure suggested by Vernon (1979) to offer a novel explanation for *why* state-owned entities (SOEs) might seek a global footprint and global cash flows: *to achieve resource independence from other state actors*. We leverage a natural experiment in India and outline both quantitative and qualitative evidence from 42 Indian state-owned laboratories to support this argument.

One of the key tenets of standard RDT is the "power use" hypothesis. This broadly states that in interorganizational relationships, a power imbalance enables the dominant actor to influence the power-disadvantaged actor and extract a higher share of the exchange surplus (Casciaro & Piskorski, 2005). In the context of SOEs, RDT could be used to analyze the power imbalance between SOEs and other state actors, such as government ministries and government agencies that have ownership and control rights in the SOE. International business scholars have utilized the power use hypothesis to study the relationship between SOEs and other state actors on issues like foreign direct investment (FDI) decisions (e.g., Cui & Jiang, 2012; Wang, Hong, Kafouros, & Wright, 2012). However, a relatively open question in the field of international business is how an SOE can break free from this power imbalance and establish *resource independence* from other state actors by becoming a multinational firm and/or by generating global cash flows. This question has become more important over the past two decades given the "reinvention" of state capitalism, as documented by Musacchio and Lazzarini (2012). This line of questioning in international business dates back to Vernon (1979), who proposed that SOEs create resource independence from home-country

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governments by creating independent cash flow streams. Vernon also suggested that engaging with multinational corporations (MNCs) was one way to establish such resource independence. However, there are no empirical studies that build on Vernon's (1979) theoretical propositions.

In this paper, we build on standard RDT and Vernon's (1979) idea, and we posit that R&D-oriented SOEs can achieve resource independence and launch a global footprint by licensing high-quality foreign patents to multinationals. In other words, we explore an important motive for *why* SOEs might license intellectual property (IP) to multinationals and might seek a global footprint. We argue that the underlying motive for doing so might be to seek resource independence from other state actors who exert control over the SOE in question.

The recent literature on SOEs has been focused on the theme of privatization as a mechanism to achieve resource independence; we argue that creating an independent cash flow stream by licensing high-quality foreign patents to multinationals might be an alternative/complementary mechanism to privatization that allows SOEs to achieve resource independence.

We explore this proposition in the context of 42 premier state-owned laboratories in India employing more than 10,000 scientists and technical staffers. This empirical context offers us a natural experiment to test our core proposition. At a time when the Indian government faced severe resource constraints, was launching an ambitious privatization program for SOEs, and was reforming the Indian patent law, the 42 labs were granted a large number of US patents. The labs then licensed several of these US patents to multinational firms such as General Electric (GE), and revenue from multinationals increased from 3 to 15% as a proportion of government budgetary support. Over time, the patent mix of these labs moved toward a United States Patent and Trademark Office (USPTO)-based patent portfolio and this strategy of leveraging global patents helped the labs launch a global footprint involving R&D partnerships with multinational firms.

Our choice of India as a context to conduct our research is motivated by the fact that a common economic shock – the fiscal and economic crisis of 1991 – triggered: (i) domestic patent reform, influenced by the International Monetary Fund (IMF) and the World Trade Organization (WTO); (ii) severe resource constraints for SOEs; and (iii) an ambitious SOE privatization program. Gupta (2005) documents details of the SOE privatization program in India and outlines that several SOEs, including public R&D labs, were kept outside the ambit of the privatization program. Given that the state-owned R&D labs *could not be privatized* (as they were part of the "strategic sector"), they had to seek alternate mechanisms to generate cash flows and seek resource independence. Our empirical analysis documents that the Indian state-owned R&D labs leveraged an important aspect of the patent reform (the "Patent Cooperation Treaty" or PCT clause), filed high-quality foreign patents, and licensed foreign patents to multinationals to achieve partial resource independence. In other words, licensing patents to MNCs could be an alternative/complementary mechanism to privatization for SOEs to achieve resource independence.

A major challenge in conducting research on SOEs in emerging markets is finding the right data set. Publicly available data sets, including those focused on emerging markets, do not track microdata on emerging market SOEs.[1] To address this issue, we worked closely with one of the largest emerging market research entities comprising multiple national laboratories, "The Council of Scientific and Industrial Research" (CSIR) in India, and we collected data for 42 labs over a 14-year period (1993–2006). In 2002, collectively these labs had become the single-largest emerging market PCT applicant. We find that over 1993–2006, Indian state-owned laboratories increased both Indian and foreign patent filings; however, the patent mix aggressively moved toward United States and other foreign patents. Also, while government budgetary support either declined year on year or remained flat from 1995 to 2005, revenue from multinationals increased fivefold from 1995 to 2005. In addition, an increase in licensing revenue from multinationals is related to an increase in foreign patents, but not to an increase in domestic patents. We conducted a counterfactual test and compared foreign patent filing of the CSIR labs with other SOEs and other private entities in India, and we document that the CSIR labs were unique in their move toward foreign patent filing.

To summarize, our central research question is whether SOEs can leverage IP to create an independent cash flow stream and launch a global footprint, even in the absence of privatization, thus achieving resource independence from other state actors. Here, we are also motivated by insights from the innovation and public R&D literature. In this literature, several papers have looked at the impact of incentive and organizational reform on IP creation at public R&D entities. Key contributions in this literature include Henderson, Jaffe, and Trajtenberg (1998), Jaffe and Lerner (2001), Jensen and Thursby (2001), and Lach and Schankerman (2008). Henderson et al. (1998) studied the effect of the Bayh–Dole Act that allowed universities and nonprofit institutions to retain titles to patents derived from federally funded R&D. This reform also allowed government-owned labs to grant exclusive licenses on government-owned patents. Jaffe and Lerner (2001) studied the impact of the initiatives since 1980 to encourage patenting and technology transfer at the US national laboratories. Their analysis is based on 23 federally funded research and development centers from 1977 to 1997. Specifically, they studied the effect of the 1986 reform that encouraged patenting and technology transfer by labs, and they report that patenting post-1986 was 50% greater than patenting prior to 1986. Lach and Schankerman (2008) study incentives and invention in US universities and document that faculty members respond to royalties both in the form of cash and research lab support, indicating pecuniary *and* intrinsic research motivations. Collectively this literature documents that state-owned R&D entities exhibit higher IP creation and commercialization in response to incentive and organizational reform.

[1]Examples include CMIE Prowess for India or FinAsia for China.

Theoretical Foundation – RDT

Our theoretical arguments are based on standard RDT and its departure in the context of SOEs, as suggested by Vernon.

RDT owes its origins to the work by Aldrich and Pfeffer (1976) and Pfeffer and Salancik (1978). A recent essay on the theory by Wry, Cobb, and Aldrich (2013: 442) summarizes the key two original tenets of the theory: (i) an organization's external environment comprises other organizations, each with their own objectives and interests and (ii) organizations hold power over a focal firm and may constrain its behavior if they control resources vital to the operations of the firm. These resources include monetary or physical resources, information, and social legitimacy.

Pfeffer and Salancik (1978) also discuss symbolic approaches for managing conflicts with the environment; these include restricting information flows, hiding controversial actions, or actively working to shape the perceptions of external actors. The authors also outline strategies that change the organizational boundaries and thereby absorb external constraints. These strategies include horizontal and vertical mergers. Finally, the authors outline strategies where firms establish bridging ties to other organizations to obtain information or establish legitimacy, and/or as a means of co-optation.

One of the central tenets of the RDT is the relation that Pfeffer and Salancik (1978) outline between resource dependence and power for a dyad of organizations. They build on Emerson (1962) and the exchange-based theory of power to surmise that power and dependence are the obverse of each other. In other words, if A is dependent on B, then B has power over A.

As Casciaro and Piskorski (2005) state, this relationship between resource dependence and power has led RDT scholars to develop the power use hypothesis. This hypothesis broadly states that in interorganizational relationships, power imbalance enables the dominant actor to influence the power-disadvantaged actor and extract a higher share of the exchange surplus. Casciaro and Piskorski (2005) also cite several empirical studies (including Burt, 1983, and Pfeffer & Leong, 1977) that provide support for the power use hypothesis. Extending this hypothesis, RDT scholars have posited that managers act to reduce their dependence on other organizations by trying to control vital resources. Ulrich and Barney (1984) frame the concept of power as control over vital resources.

The organizational literature that builds on RDT has studied the relationship between ownership and control. Ownership affects firms in two ways: (i) through the extent of ownership or (ii) by getting involved in the decision-making process. Demsetz and Lehn (1985) note that greater ownership leads to more centralized power. Also, owners who are more involved in the decision-making processes of a firm exert greater influence on firm outcomes (Wry et al., 2013). In the context of SOEs, other state actors, such as government departments with ownership and control rights over the SOE, might exert power over SOE managers.

The issue of SOE resource dependence on other state actors has been revisited in recent studies on SOE's FDI decisions. Cui and Jiang (2012) argue that state ownership creates a linkage between a company and its home government, which makes the SOE resource dependent on home-country institutions. This particularly

affects SOE's FDI decisions. In situations where the SOE chooses a strategy that is not aligned with government objectives, the home-country government can exert influence to either cancel or delay the project. But, if SOE managers concur with government internationalization strategies, they have strong home-country support, which reduces the risks of internationalization. Wang et al. (2012) analyzed how governments of emerging market enterprises impact the internationalization strategy of these companies. They found that the level of the government official involved and the type of involvement can influence a company's decision to invest abroad. Wang et al. (2012) state that the SOE's strategic choice is affected by being in a hybrid state of neither market nor hierarchy. The authors suggest that emerging market governments exert power over their MNCs through informal or formal channels. The influence, however, is determined based on the degree of state ownership and the level of government affiliation. The former refers to state ownership and the latter to the rank of the government official the company is connected to through relationships.

Resource Independence and Privatization

Privatization might enable SOEs to seek resource independence from other state actors. The SOE privatization literature, starting with Shapiro and Willig (1990), has identified several "costs" related to public ownership of firms. Inefficiencies of state-owned firms – for example, principal–agent issues, lack of residual claimant, absence of motivation and monitoring, soft budget constraints and so on – have been documented in the agency theory and property rights literature. Given this background, recent theory, starting with Shleifer (1998) points out that private ownership is better than state ownership in most contexts; a key reason being that government employees have very weak incentives with respect to both cost reduction and innovation. The recent empirical literature also overwhelmingly supports privatization. In the context of emerging markets such as India, Majumdar (1998) documents a significant performance shortfall for government-owned firms compared with private firms for the period 1973–1989.

However, privatization may not be a feasible policy option for all SOEs. In India, for example, as Kapur and Ramamurti (2002) point out, the government had a stated objective of not privatizing the strategic sector. In other cases, only partial privatization may have been implemented. One particular study by Jones, Megginson, Nash, and Netter (1999) documents that in a sample of share-issue privatizations from 59 countries, just 11.5% of the firms sold all of their capital and less than 30% sold more than half of their capital in the initial public offering. As Dastidar, Fisman, and Khanna (2008) point out, governments may not privatize firms due to unprofitability or because of political interests.[2]

[2]A similar result is reported by Gupta, Ham, and Svejnar (2000), who report that governments sequence privatization by selecting the most profitable firms first. Bardhan (2003) mentions yet another difficulty of privatization in India and highlights that organized labor is opposed to privatization.

A nascent empirical literature looks at policy alternatives and complements to privatization and, in the case of Chinese SOEs, studies by Groves, Hong, McMillan, and Naughton (1994, 1995) have shown that incentives and other organizational changes (e.g., selecting managers by auctions) are positively related to worker incomes and investment. However, an important white space in this literature is studying whether and how SOEs can leverage intellectual property to craft a turnaround and launch a global footprint.

Alternative Mechanism to Achieving Resource Independence – Seek Global Cash Flows

Vernon (1979) lays out an important mechanism for SOEs to achieve resource independence. In the context of SOEs, this mechanism could be an alternative/complementary mechanism to privatization.

In an article titled *The International Aspects of State-Owned Enterprises*, the author outlines the "multiplicity of roles" of the SOE and outlines the following roles for the SOE in the eyes of the home-country government: (i) the SOE as a "fiscal agent", where the state-owned firm often ends up being a device to collect monopoly taxes on behalf of the government; (ii) the SOE as the "national champion", where the SOE is seen as a means of "developing or maintaining an industry that the private sector seems unwilling to enter or unable to defend" (Vernon, 1979: 8); (iii) the SOE as a mobilizer of national monopoly or monopsony power; (iv) the SOE as an agent in bilateral trade agreements; and (v) the SOE as an agent of industrial policy, where the government might employ the SOE to develop a lagging section of the country.

Vernon (1979) then argues that this multiplicity of SOE goals leads to potential conflict between the SOE manager and the home government. The SOE manager has to respond to multiple signals from the government in relation to the multiple goals the government sets for the SOE. Responding to multiple and often conflicting goals is further complicated by two issues – the presence of coalitions and the short tenure of government ministers. On the issue of coalitions, Vernon (1979: 10) says that "governments are characteristically composed of a coalition of forces, each of which places rather different weights on conflicting goals. One ministry, therefore, may stress inflation goals, another employment goals, another budgetary goals; one politician will favor his area of the country, another politician his. And any of these elements in the coalition could easily have some voice in determining the rewards and punishments meted out to the manager". Vernon (1979: 10) also outlines the potential conflict between the long-term career goals of the SOE manager and the short-term tenure of the politician: "The tenure of ministers in most governments is short – shorter in many cases than the tenure of professional managers in state-owned enterprises. By responding faithfully to the goals of one administration, therefore, the manager will not necessarily contribute to his career goals; the preoccupation of one administration to achieve budgetary balance, for instance, could easily be succeeded by the preoccupation of the next administration to maintain employment".

As a solution to this conflict between the SOE manager and the politician, Vernon (1979) suggests that SOEs should become *resource independent* from other related state actors. He describes the tendency of SOE managers to seek independence from their "government apparatus" using three different labels – "desire for autonomy", "discretion", or "increased bargaining power". This forms the core theoretical foundation of our study – the desire of SOEs facing power imbalance to seek resource independence from other government actors. He concludes that managers of SOEs should try to enter partnerships with MNCs in order to increase "their autonomy in relations with their home governments" (Vernon, 1979: 14).

In subsequent research on SOEs in international business, we could not find studies *directly* related to Vernon's resource independence hypothesis, that is, studies that document SOEs leveraging multinationals and global cash flows to seek resource independence from other state actors. This is a gap we seek to fill.

Motivating Case Study – The National Chemical Laboratory (NCL)–GE Alliance and Broader Impact

Prior to outlining our detailed hypotheses, we document a motivating example that highlights the theoretical reasoning of Vernon. This stylized case study suggests that foreign patenting at CSIR was instrumental in creating an independent cash flow stream at CSIR labs and in formulating long-term partnerships with multinationals such as GE.[3] In 1989, Dr Raghunath Mashelkar took over as director of the NCL, one of the CSIR labs. Prior to this, CSIR filed for less than five foreign patents every year. Around 1989, NCL scientists (under the new leadership) prioritized research in the area of polymer preparation, condensation, and poly carbonates and filed for the first US patents in this area.[4] Around 1991, NCL started interacting with GE, a large purchaser of a special compound, THPE.[5] NCL's idea was to enter the THPE market as, at the time, Hoechst Celanese, USA was the only player. In interviews, CSIR scientists involved recounted that it took "several trips to the US and several face-to-face meetings with the GE scientists to even initiate the conversations. Initially, there was a lot of skepticism around whether a state-owned laboratories in India could develop a novel process to generate a complex compound."

In 1994, NCL initiated a program funded by GE that aimed to develop a proprietary process for THPE. CSIR scientists noted that several batch experiments were conducted on a pilot scale in a 50-liter batch reactor to try out alternative purification strategies. The outcome was the development of a new color removal and purification process. In parallel, NCL started aggressively patenting in the USPTO system and

[3]The case study is based on interviews with Dr Mashelkar and other CSIR executives.

[4]For example, patent number 5,080,121 filed in August 1990 claimed to create a novel polymer useful for drag reduction in hydrocarbon fluids in exceptionally dilute polymer solutions.

[5]THPE is a branching agent used in the synthesis of high-grade polycarbonates with properties of high transparency, good mechanical strength, and high parison strength. 1,1′,1″-Tris(4′-hydroxyphenyl) ethane; a branching agent used in the synthesis of high-grade polycarbonates.

filed several US patents in the area of polymers from 1994 to 2000.[6] In interviews, Dr Mashelkar and other NCL scientists stressed the role played by the first few USPTO patents on polymers in "getting a foot in the door at GE". The NCL–GE alliance worked successfully for 9 years and broke Hoechst's global THPE monopoly. NCL earned revenues of around US$8.5 million from GE over this period.

We also conducted several interviews with CSIR employees to understand how the NCL–GE alliance motivated other CSIR labs to license foreign patents to multinationals. Following the 1991 economic shock, CSIR declared a formal "Intellectual Property Management Policy" in 1996. The policy stated its objectives as the following: "To maximize the benefits to CSIR from its intellectual capital by stimulating higher levels of innovation through a judicious system of rewards, ensuring timely and effective legal protection for its IP and leveraging and forging strategic alliances for enhancing the value of and from its IP" (CSIR Profile, 2005: 295).

The filing of foreign patents for the different CSIR labs was coordinated by a central team known as the "Intellectual Property Management Division". With India joining the PCT in 1998, CSIR extensively leveraged the PCT mechanism to file foreign patents to save on patent filings costs. In a 2007 document, The World Intellectual Property Organization (WIPO) outlined the benefits of leveraging the PCT mechanism to file foreign patents: "The PCT establishes a procedure for the filing and processing of a single application for a patent which has legal effect in the countries which are Treaty members" (WIPO, 2007: 4). In other words, the PCT enabled CSIR and other patentees to save costs associated with filing separate foreign patents across multiple countries. These included the cost of translating patent applications into local languages across the world, the costs of local filing fees, and the costs of local legal experts. As of 1 March 2007, the PCT had 137 contracting states. Interviews with CSIR employees indicate that in 2002, CSIR filed 129 US patents, more than any other Indian entity, and filed 184 PCT applications, higher than Samsung and LG Electronics. CSIR was featured in the WIPO's top PCT filers' annual rankings in 2001, 2002, and 2003, with a second, first, and third rank, respectively. Several of these patents were licensed to multinationals. The list of multinational firms that licensed technologies and/or conducted contract research at CSIR include GE, PepsiCo, Du Pont Merck, L'Oreal, Mitsui, Pfizer, Novo Nordisk, Unilever, P&G, ICI, SmithKline Beecham, and Mitsubishi. This was a dramatic transformation for a SOE that had no multinational firms licensing its patents prior to 1994.

As a precursor of filing foreign patents and licensing these patents to MNCs, several CSIR labs made investments in new infrastructure and developed new capabilities. Interviews with CSIR employees indicate that the Center for Cellular and Molecular Biology in Hyderabad developed capabilities in X-ray crystallography and proteomics and focused on an ambitious drug discovery program

[6]For example, the following US patents: 5,780,578; 5,851,546; 6,379,599; 6,420,487; 6,605,714; 6,689,836; 6,794,467; and 6,867,268.

related to cancer. NCL made investments in new technologies such as xylofining and polymer condensation. As a result of these investments, NCL developed capabilities in polymers and licensed several technologies related to this capability, including THPE, fiber reinforced plastics for making two-wheeler components, polyurethane-based water proofing compounds, polyethylene cable compounds, super-absorbing polymers for immobilization of enzymes and so on.

Hypothesis Development

India – Macroeconomic Shock of 1991

In 1991, India was deep in an economic crisis triggered by both political and economic factors. The economy was in the doldrums – inflation was at an annual rate of 17% and there was an unsustainably large fiscal deficit. A major concern was the unprecedented possibility that India would default on its external debt. The government entered talks with the IMF to seek emergency aid. India needed more than $5 billion from the IMF to meet the emergency. Among the IMF's demands was reducing the budget deficit, decreasing the licensing requirements for companies, opening doors for foreign companies, and liberalizing investment.

The central theme of the economic crisis was an unsustainably high fiscal deficit. As Ghosh (2006) outlines, the antecedents of this unprecedented high fiscal deficit were gradually building up in the late 1970s and 1980s. The oil shock of 1979, high agricultural subsidies, increased defense spending, and a reduction of direct taxes all led to a fiscal deficit in the range of 9.4% in 1990–1991.

As a result of the deficit, the Indian government faced an unprecedented resource crunch. Ghosh (2006) documents that the Indian government had sent informal bailout proposals to the IMF as early as September 1989. The author also quotes then Finance Minister Madhu Dandavate who, in his budget speech in February 1990, declared that "the fiscal imbalance [was] the root cause of the twin problems of inflation and the difficult [BOP] position" (Ghosh, 2006: 418). From July to September 1990, India accessed $660 million from its reserve tranche in the IMF. By the end of 1990, when reserves could cover only three weeks of imports, India negotiated $1.8 billion from the IMF under the Compensatory and Contingency Financing Facility.

Indian Domestic Patent Reform

The IMF-led reforms of the 1990s led to a major change in India's domestic patent system. For several decades since her independence, India had a conservative national patent system and refused to join the Paris Convention (1883), which acts as a common agency for national patent systems.[7] Under the Indian Patents

[7]In the area of patents, India and countries under the New International Economic Order tried to push for free flow of technological information, arguing that it was owned as part of a common heritage (Braithwaite & Drahos, 2000).

Act (1970), only process, not product, patents were allowed in medicines, food, and agrochemicals. The term of patents was 14 years and 5–7 years in chemicals and drugs. There was compulsory licensing and license of right,[8] and the government was allowed to use patented inventions to "prevent scarcity". For several years, despite pressure from the WTO, India did not reform its patent laws in accordance to the Trade Related Aspects of Intellectual Property Rights agreement, which required India to allow product patents in pharmaceuticals and agrochemicals.[9]

However, triggered by the IMF and the WTO in 1999, there was a major reform to the Indian Patent Act.[10] Applications were allowed for product patents in medicines, food, and agrochemicals, and exclusive marketing rights were introduced. Patent terms were increased to 20 years. There were no licenses of right; compulsory licensing was allowed, but was more restricted. Finally, the government was restricted to selling on a noncommercial basis (Ramanna, 2003). In parallel, there was a major investment in new patenting centers and training patent examiners. India also joined the Paris Convention and the PCT in 1998.[11] One could argue that the reforms made India a more attractive location for filing patents and created a level playing field for patenting in India *vis-à-vis* patenting in foreign locations.

We compared the Indian patent system (before and after the reform) with the USPTO. In doing this, we spoke to the IP management team within CSIR and also to several patent lawyers in India. In summary, post reform India matched the United States on several aspects, such as allowing product patents, equalizing the term of patents, and joining the PCT. Details are in Table 1.

Implications for SOEs

The economic crisis of 1991 had far-reaching implications for SOEs. The economic crisis led to the Industrial Policy Resolution of 1991, which stated an ambitious SOE privatization goal – the government intended to reduce government ownership to 26% of equity, the minimum equity holding necessary for certain voting powers in all state-owned firms, except for the defense, atomic energy, railway, and other strategic sectors (Gupta, 2005).

The economic crisis also led to resource constraints for India's SOEs, including India's premier state-owned R&D labs. These premier R&D labs could not be

[8]These provisions allow governments to issue licenses to allow other companies to make patented products or use patented processes without the consent of the patent owners under certain circumstances.

[9]The government tried to pass an ordinance in 1994 reforming India's law to conform to TRIPS, but this attempt failed in the Upper House of Parliament. The pharmaceutical industry argued that drug prices would rise if TRIPS was adhered to and NGOs argued that farmers would be hit severely if the patent system was reformed.

[10]The reformed bill was passed in the Upper House of Parliament in December 1998 and in the Lower House in March 1999.

[11]The patent reform process continued until 2002.

Table 1 Comparison of patent systems in the United States and India (pre and post reform)

Criteria	USPTO	India pre-1999	India post-1999
Type of patent allowed	Design, utility, plant patents	Only process patents in medicines, food, and agrochemicals	Product patents in medicines, food, and agrochemicals
Term of patent	Either 20 years from the earliest claimed filing date or 17 years from the issue date; for design patents, 14 years	14 years and 5–7 years in chemicals, drugs	20 years
Jurisdiction	United States	India	India+PCT applications allowed
Cost of filing	Filing cost around $3500; total cost around $7000–$20,000	Around 60–70% cheaper	Around 60–70% cheaper
Time needed	Around 3–5 years	Around 8–9 years	Around 3–5 years
Patent right granted to	First to invent	First to file	First to file

Source: Interviews with CSIR IP management team and Indian patent lawyers.

privatized, as they were part of the "strategic sector"; however, they were now forced to seek resource independence given the uncertainty of increases in government budgetary support. Given this, we build hypotheses on how R&D-focused SOEs could react to the domestic patent reform.

Domestic entities' reactions to patent reforms in emerging markets have long been studied in the international business and economics literature. Most studies have reported either a null or negative result of patent reform on local patenting by domestic entities. In a recent study, Allred and Park (2007) outline theoretical antecedents for how domestic entities might react to such reform in terms of domestic patent filings. They outline two possible reasons why domestic entities could reduce domestic patent applications in response to patent reform in emerging markets. The first reason relates to a lesser ability to imitate technologies in the face of a stronger domestic patent regime; the second reason relates to the fact that traditional knowledge is likely to be patented in the face of a stronger domestic patent regime. They also provide empirical evidence that in emerging markets, patent strength negatively affects domestic patent fillings.

In addition to the arguments and results presented by Allred and Park (2007), there are several studies in economics that document a null or negative result of domestic patent filing by residents in response to patent reform. These studies include Sakakibara and Branstetter (2001), Branstetter, Fisman, and Foley (2006), and Lerner (2002), and they report that patenting by domestic residents either declines or remains stagnant post patent reform. Lerner (2002) studies 177 events of patent reforms in 51 countries over a 150-year period and finds that residential patent filings did not react to domestic patent reform. Sakakibara and Branstetter (2001) study the Japanese patent reform of 1988 and report a negative shift in

domestic patent applications. They also look at Japanese firm patenting in the United States and report that there is no sign of a shift or acceleration around the time of patent reform. Branstetter et al. (2006) look at the impact of intellectual property rights (IPR) reform on resident versus nonresident patenting across 16 countries over 1982–1999. They report that relative to the pre-reform period, patenting grows for nonresidents after reform, but remains flat for domestic residents. Lo (2011) also found, when researching the impact of the Taiwanese patent reform in 1986, that the reform stimulated R&D, but that R&D-intensive industries increased their patenting in the United States, not in Taiwan. This leads us to our first hypothesis:

Hypothesis 1: Post domestic patent reform, premier state-owned R&D entities in India do not move their patent mix toward filing more domestic patents.

A Unique "Seeking Resource Independence" Explanation for the Null/Negative Result

Given that the majority of prior studies in both the international business and economics literature have reported a negative or null result of domestic patent filing in response to patent reform in emerging markets (Allred & Park, 2007; Branstetter et al., 2006; Lerner, 2002; Sakakibara & Branstetter, 2001), we now provide unique theoretical reasoning to explain the result. Here, we leverage Vernon's (1979) resource independence hypothesis. To recap, Vernon suggests that SOE managers try and secure resource independence from other related state actors. This helps managers of SOEs better navigate the challenges related to the multiplicity of the SOE role.

Seeking resource independence entails creating a cash flow stream independent of government budgetary support. To quote Vernon (1979: 10), "Maneuvers of this kind include efforts to develop a cash flow that is independent of the control of their supervising ministries, as well as efforts to link up with foreign partners who are capable of providing resources that lie beyond national controls." Vernon also suggests SOEs seek resource independence by creating a cash flow stream linked to MNCs. He also provides more details of this SOE–MNC arrangement and, to quote the author (Vernon, 1979: 12), "These are embodied in licensing agreements, joint ventures, and management contracts which often assign to the private multinational partner a considerable role in the operation of the facilities of the state-owned enterprise."

Recent studies in international business have looked at how domestic entities in emerging markets can create cash flow streams by leveraging MNCs. Singh (2007) used patent citation data as a proxy for examining the knowledge flows between MNCs and host-country organizations. He found that MNCs gain more from host-country knowledge than they contribute, especially in countries where domestic organizations are more technologically advanced. This knowledge outflow from domestic organizations can benefit the domestic organizations in terms of payments, royalties, or license fees. In summary, Singh (2007) shows that domestic

entities in emerging markets can create independent cash flow streams by licensing technologies to MNCs. Extending this logic to SOEs, one can argue that SOEs can achieve resource independence and satisfy Vernon's recommendation by licensing technologies to MNCs.

However, it is not clear *ex ante* why SOEs would need *foreign* and not *domestic* patents for such MNC licensing deals. In other words, it is not clear *ex ante* why we might observe a null/negative result with regard to domestic patents and why SOEs might need foreign patents to create independent cash flow streams of licensing technologies to MNCs.

Here we turn to the signaling model in economics, first outlined by Spence (1973). Spence used a hiring situation to show how signaling worked. An individual who, for example, got an education would use this to obtain a higher wage. Spence (1973) found that if an individual did not invest in an education, he or she would get a lower wage and the loss would exceed the gain from not obtaining a degree. In the hiring situation, the signal lies in a feedback loop where the employer's expectations lead to wages offered for various levels of education, which leads to job seekers investing in education. In the same way, an emerging market SOE that files for foreign patents is making an investment by incurring a higher patent filing cost, given the cost differentials of filing a patent in an emerging versus a developed country. Here the assumption is that MNCs are willing to offer higher licensing fees when the patent is from a developed patent system. MNCs might be willing to pay higher licensing fees for foreign patents filed in a developed country, as the underlying patent might be of better "quality", might have legal jurisdiction in the larger Western markets of the MNC, or might be less affected by concerns of patent law violations given the stronger IPR regime in the developed country patent system where the patent is filed. This leads to our second hypothesis:

> **Hypothesis 2**: For premier state-owned R&D labs, revenue from MNCs is correlated to an increase in the number of foreign patents, but not to an increase in the number of domestic patents.

Also, as Fig. 1 indicates, if the domestic patent reform and the need for resource independence of SOEs are both triggered by a common economic shock, then despite domestic patent reform, R&D-focused SOEs could move their patenting focus to foreign patents in an attempt to license such foreign patents to MNCs. This could offer a unique "seeking resource independence" explanation for the negative/null result in the domestic patent reform literature in the context of SOEs.

Data and Methods

The CSIR is a major government-owned research organization in India, comprising 42 national laboratories and around 10,000 scientific and technical employees.[12] As outlined earlier, in response to the Indian economic crisis of 1991 and the resulting

[12]The list of CSIR labs along with their locations is available from the authors.

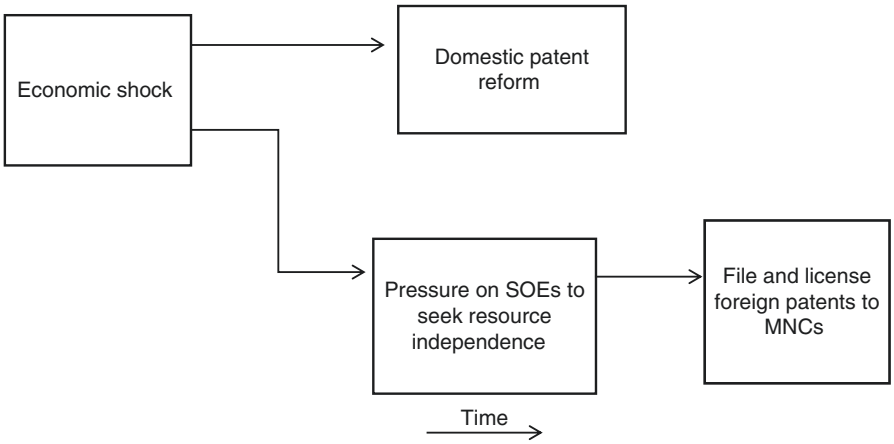

Fig. 1 Theoretical explanation for domestic patent reform result in context of SOEs

constraints in securing government budgetary resources, the CSIR labs started a major transformation process around 1996 under the leadership of a new director general, Dr Mashelkar. The *CSIR 2001 Vision Document* published in January 1996 outlined ambitious goals for 2001.[13] As a result of this reform process, the labs started from a base of negligible foreign patents and ended up with more patents than all domestic private firms combined. The labs were then able to license several of these patents to multinational firms, and revenue from multinationals increased from 3 to 15% as a fraction of government budgetary support. In 2002, CSIR emerged as the single-largest PCT applicant from emerging markets. Summary statistics and the correlation matrix are reported in Tables 2a and 2b.

Domestic and Foreign Patenting Before and After Patent Reform

We first analyzed what happened to domestic and foreign patenting by the CSIR laboratories before and after the 1999 patent law reform. Using the methodology employed by prior empirical papers focused on patent law reform – including Sakakibara and Branstetter (2001) and Branstetter et al. (2006) – and a similar

[13](1) Move toward the path of self-financing by generating more than Rs. 7 billion from external sources versus Rs. 1.35 billion in 1994–1995, of which at least 50% will be from industrial customers (up from 15% in 1994–1995); (2) Develop at least 10 exclusive and globally competitive technologies in niche areas; (3) Hold a patent bank of 500 foreign patents (up from 50); (4) Realize 10% of operational expenditure from intellectual property licensing (up from<1%); and (5) Derive annual earnings of $40 million from overseas R&D work and services (up from<$2 million). Note: the figures here are in Indian rupees and US dollars, as the text is reproduced from the original.

Table 2a Summary statistics for CSIR

Variable	Description	Observation	Mean	Standard deviation	Minimum	Maximum
Year	Year	504	2000	4.04	1993	2006
$pat\_filed\_abr_{it}$	Number of foreign patents filed by lab *i* in year *t*	432	12.0	21.4	0.0	160
$pat\_filed\_ind_{it}$	Number of Indian patents filed by lab *i* in year *t*	432	9.1	14.8	0.0	122
$revenue\_MNC_{it}$	Revenue from multinationals to lab *i* in year *t*	305	10.6	18.7	0.0	131
$govt\_budget_{it}$	Budgetary support from government to lab *i* in year *t*	430	50.6	69.7	4.1	693.5
$publications_{it}$	Publications for lab *i* in year *t*	428	60.3	74.5	0	552

Table 2b Correlation matrix

	pat_filed_abr	pat_filed_ind	revenue_MNC	govt_budget	publications
pat_filed_abr	1.00	—	—	—	—
pat_filed_ind	0.61	1.00	—	—	—
revenue_MNC	0.33	0.29	1.00	—	—
govt_budget	0.12	0.04	0.20	1.00	—
publications	0.58	0.51	0.51	0.26	1.00

Notes: The variable revenue_MNC represents revenue earnings from multinational firms. The variable govt_budget represents the government budgetary support received by a lab. All monetary variables are in Rs. million. For most of the variables, the data was collected for 1995–2006; for a few variables, we have additional data for 1993 and 1994.
Source: CSIR.

methodology used by Jaffe and Lerner (2001), we used a (post_reform) dummy variable and ran the following fixed effects regressions:[14]

$$\begin{aligned} \ln\_pat\_filed\_abr_{it} = {} & \beta_0 + \beta_1 * post\_reform \\ & + \beta_2 * govt\_budget_{it} + \beta_3 * pub_{it} \\ & + Z_i + Y + \varepsilon_{it} \end{aligned} \tag{1}$$

[14]Here, *i* indicates an individual laboratory and *t* indicates the individual year.

$$\begin{aligned} \ln\_pat\_filed\_ind_{it} = {} & \beta_0 + \beta_1 * post\_reform \\ & + \beta_2 * govt\_budget_{it} + \beta_3 * pub_{it} \\ & + Z_i + Y + \varepsilon_{it} \end{aligned} \tag{2}$$

The dependent variables in these two regressions measure the number of patents filed abroad (pat_filed_abr) and in India (pat_filed-ind) by each individual CSIR laboratory. Based on the logic articulated by several prior papers, including Jaffe and Lerner (2001), that the patent production function is multiplicative and the fact that certain labs do not have patents in certain years, we used the logarithm of one plus the number of patents as the dependent variable.

The key independent variable of interest is the post reform dummy variable (post_reform). The two main time-variant control variables measure the year-wise number of publications (publications$_{it}$) and the level of government budgetary support (govt_budget); the inclusion of these two variables allowed us to control for the size and scale of individual lab's R&D operations. We also controlled for the age of the lab and added dummies for location and type of science pursued[15] and year dummies Y_i.

In addition, we used data from 593 scientist CVs and added several time-invariant control variables. These include the percentage of scientists who have PhDs (fraction_PhD); average number of countries visited by scientists (avg_countries_visited); percentage of scientists who have traveled to the United States (fraction_visited_US); average number of awards received by scientists (avg_awards); average number of books (avg_books), articles (avg_articles), and reports (avg_reports) published by scientists and so on. Also, in line with Jaffe and Lerner (2001), we construct a measure of technological focus (focus) on individual labs by computing the Herfindahl index of patent classes for patents granted to a lab.

In the base case, when we first ran the fixed effects model, the time-invariant variables like location, type of science dummies, and average scientist quality measures drop out. However, we then ran a random effects model and conducted a Hausman test. Next, we explored the effect of the patent reform on the patent mix of CSIR and ran similar fixed and random effects regressions, using patent mix as a dependent variable. The control variables for this regression were similar to the prior two regressions. In our base model, the dependent variable is defined as log(1+US patents)/(1+Indian patents) and the specification is:[16]

[15]We have five dummy variables for the "type of science" pursued, one each for "biological sciences", "chemical sciences", "physical sciences", "engineering sciences", and "informational sciences". We also have 19 dummy variables for the lab location based on the 19 Indian states in which CSIR labs are located.

[16]We also used alternate specifications like log(1+US patents)/(1+Indian patents).

$$\begin{aligned} \text{ln\_patent\_mix}_{it} = {} & \beta_0 + \beta_1 * \text{post\_reform} \\ & + \beta_2 * \text{govt\_budget}_{it} \\ & + \beta_3 * \text{pub}_{it} + Z_i + Y + \varepsilon_{it} \end{aligned} \tag{3}$$

Domestic and Foreign Patents and Revenue from MNCs

Here, our main specification is:

$$\begin{aligned} \text{ln\_revenue\_MNC}_{it} = {} & \beta_0 + \beta_1 * \text{govt\_budget}_{it} \\ & + \beta_2 * \text{ln\_pat\_filed\_abr}_{it} \\ & + \beta_3 * \text{ln\_pat\_filed\_ind}_{it} \\ & + \beta_4 * \text{pub}_{it} + Z_i + Y + \varepsilon_{it} \end{aligned} \tag{4}$$

The dependent variable (revenue_MNC) measures revenue from multinationals to CSIR, and the main independent variables of interest are the levels of domestic and foreign patents. We use the cumulative stock of domestic and foreign patents as the independent variables, as any of the patents "held in stock" could be licensed to MNCs to generate revenue. The two main control variables are the level of publications generated by individual labs and the level of government budgetary support; other controls include laboratory age, dummies for lab, year dummies and so on.

Comparison with Other SOE and Private Entities

Next, we compared US patenting at CSIR labs with other public R&D labs in India, state-owned firms in India, and private firms in India to establish whether or not US patenting trends at CSIR labs were dictated by broader and potentially confounding factors.

We coded 1640 USPTO patents granted to Indian entities from 1994 to 2003 and assigned each patent an "ownership" value. The ownership variable can take the following values: CSIR, Indian private, other public R&D (includes university), or state-owned firm. In this analysis, we used firm ownership information from the Prowess database that is distributed by the Centre of Monitoring Indian Economy (CMIE). This data set is widely used in studies focused on India.[17] Here we used both fixed effects and random effects difference in difference regressions to test whether the number of US patents granted (US_patents_granted) to CSIR labs was systematically higher than the number granted to other Indian entities in the same period. We had to use granted and not filed patents (unlike the prior specifications), as we knew only the granted patents for non-CSIR entities. We used three panels (CSIR labs compared with other Indian public R&D/universities, private Indian firms, and state-owned firms) and used 1996 (the first full year of Dr Mashelkar's

[17]The Prowess data set is the Indian counterpart of DataStream, and researchers have used it extensively in studies on India.

tenure as director general of CSIR) as the baseline year.[18] Here the specification was:

$$\begin{aligned}\text{ln\_US\_patents\_granted}_{it} = {} & \beta_0 + \beta_1 * \text{entity\_isCSIRlab}_t + \beta_2 * \text{post1996}_{it} \\ & + \beta_3 * \text{entity\_isCSIRlab}_t * \text{post1996} + \varepsilon_{it}\end{aligned} \quad (5)$$

In this specification, the key coefficient of interest is β_3: if CSIR labs show a disproportionate increase in US patents compared with other Indian public and private entities, the coefficient on β_3 should be positive and significant.

Results

Summary Trends – Patenting and Revenue from Multinational Firms

We first investigated the effect of the 1999 reform on overall patent filings in India. Figure 2 shows a spike in patent applications in India around 1997–1998 in anticipation of the 1999 reform. Next, we analyzed the trend of patenting at CSIR around the reform year and looked at both domestic and foreign patent filings. Figure 3 indicates that there was an increase in Indian patents filed by CSIR around 2 years prior the reform; however, this trend flattened out around the reform year of 1999. In contrast, foreign patents continued to increase for 5 years after the reform. Foreign patenting, which was one-third of domestic patenting 4 years prior to the reform, exceeded domestic patent filings 1 year after the reform. In summary, while the Indian domestic patent system was being reformed, the CSIR laboratories disproportionately increased their focus on the US patent system. Figure 4 outlines the trend of revenue from multinationals and government budgetary support from 1995 to 2005 and indicates that while government budgetary support declined or remained roughly equal in this period (e.g., year on year it declines between 1995 and 1996; 1996 and 1997; 1997 and 1998; and so on), revenue from multinationals increased fivefold from 1995 to 2005.

Regression Results – Patenting and Revenue from MNCs Post Reform

Our first major finding from the regression analyses is that after the Indian patent system reform, CSIR labs increased both foreign and Indian patent filings, but disproportionately increased foreign patent filings, moving their patent mix toward US patents. Results are reported in Table 3 and indicate support for Hypothesis 1.

[18]We also repeated the analysis using 1999 as the baseline year. The year 1999 is the beginning of Dr Mashelkar's second tenure as the director general of CSIR.

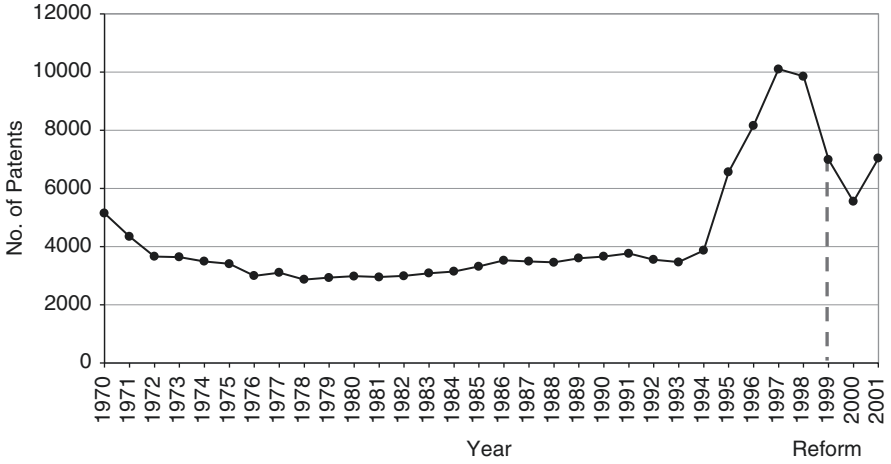

Fig. 2 Patent filings in India (1970–2001)

Note: This figure shows the trend in patent filings in India and shows a clear spike around 1997 in anticipation of the 1999 reforms

Source: Ganguli (1998) and TIFAC

Using Eq. 1, 2, and 3, we regressed foreign and Indian patent filings and measures of patent mix on the post reform dummy variable. Columns 1 and 2 indicate that foreign patent filings increase after 1999, and the result is robust to specification (fixed or random effects). Though Indian patent filings increase after 1999 in a fixed effects model (Column 3), this result does not hold for a random effects model (Column 4). Columns 5 and 6 indicate that the patent mix of CSIR moved toward US patents after 1999.

Next, we tested whether revenue from multinationals to CSIR labs responds to domestic and/or foreign patents; results are reported in Table 4 and indicate support for Hypothesis 2. Columns 1–3 indicate that licensing revenue from multinationals is positively related to the stock of foreign patents filed, but not to the stock of domestic patents filed. Column 1 conducts this analysis for 1995–2006, while Columns 2 and 3 break the sample into two time periods – 1995–1999 and 2000–2006 – and confirm this result. Based on back of the envelope estimates, we find that in the post reform period, every unit increase in log of cumulative US patent stock leads to an approximately $13 million increase in revenue from multinationals.

Regression Results – Comparison with Other Indian Entities

Table 5 summarizes the panel regressions comparing US patenting at CSIR with similar patenting at other public R&D labs and universities in India (Columns 1 and 2); private firms in India (Columns 3 and 4); and state-owned firms in India

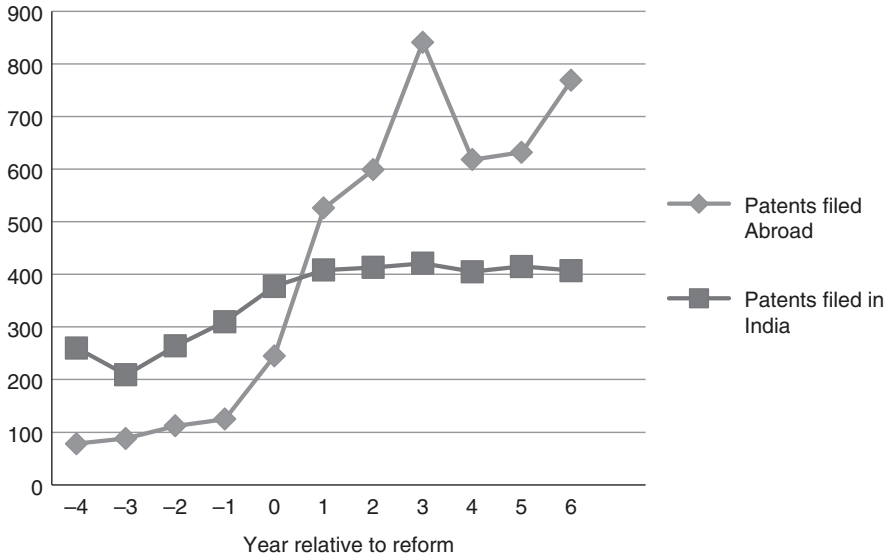

Fig. 3 Foreign and Indian patent filings by CSIR around reform year of 1999

Notes: Here, we trace foreign and Indian patent filings by CSIR around the reform year of 1999. Foreign patent filings, starting out at about one-third of domestic filings, exceed domestic filings 1 year after the reform. Foreign patent filings include filings on the USPTO, EPO, and other global patent systems

Source: CSIR

(Columns 5 and 6). We used both fixed effects models (Columns 1, 3, and 5) and random effects difference in difference models (Columns 2, 4, and 6). As summarized earlier, we used 1996 as the baseline, and the key coefficient of interest is the interaction term (post96*entity_CSIRlab). For all regressions, this coefficient turns out positive and significant, indicating that post 1996, CSIR labs disproportionately increased US patenting compared with other public R&D labs in India, other state-owned firms in India, and Indian private firms.[19] This indicates that only the *premier* state-owned R&D labs employ the strategy of seeking resource independence by filing and licensing foreign patents.

Robustness Checks

In addition to the robustness checks reported earlier, we conducted additional robustness checks. We considered a more flexible interpretation of the reform year itself. Given that the new patent law was legislated in one of the two Parliament

[19]We repeat the analysis with 1999 as the baseline year. This is the midpoint of Dr Mashelkar's regime. We get similar results in this case. Results are available from the authors.

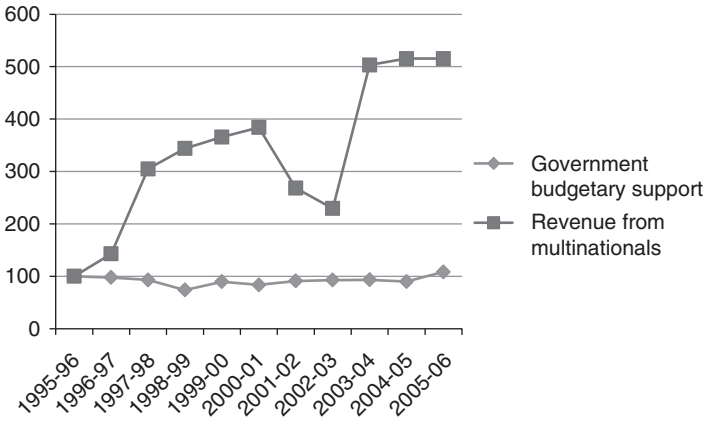

Fig. 4 Trend of revenue from multinationals and government budgetary support

Notes: Here, we trace revenue from multinationals and government budgetary support from 1995 to 1996 and 2005 to 2006. We scale the trend of both revenue from multinationals and government budgetary support to their respective levels in 1995; in other words, the 1995 levels are treated as 100 and the subsequent figures are scaled to the 1995 levels

Source: CSIR

Houses (the "Lok Sabha") in December 1998, we repeated the analyses with 1998 (instead of 1999) marked as the patent reform year; results remain consistent.

Prior studies have also indicated that the reform was not a single-year event and that there were several key events that happened prior to and post the reform year. To take care of these issues, we repeated all the tests by breaking the data into three periods: 1995–1999, 2000–2004, and 2005–2006. Here we find that for all key variables (Indian and foreign patent filing, patent mix, revenue from multinationals and so on), there is a progressive increase in values from Phase 1 (1995–1999) to Phase 2 (2000–2004) and, finally, to Phase 3 (2005–2006).

We also find that there is a positive and significant relation between ln_share (delta_ ln_share) of US patent stocks and ln_share (delta_ln_share) of revenue from multinationals in both the overall panel and in the post reform period. The results are robust to first differencing and choice of method (GMM or fixed effects). We also conducted robustness checks of our random effects estimators using the corrections suggested by Bell and Jones (2012).

Discussion

Main Theoretical Contribution

Our main theoretical contribution is that we provide a novel explanation for *why* SOEs might seek global cash flows and a global footprint: *to seek resource independence from other state actors*. We build on the power use hypothesis of

Table 3 Panel regression results – Impact of patent reform on patent filings and patent mix

	Dependent variable					
	(1)	(2)	(3)	(4)	(5)	(6)
	ln_pat_fil_abr	ln_pat_fil_abr	ln_pat_fil_ind	ln_pat_fil_ind	ln_patent_mix	ln_patent_mix
post_reform	1.57*** (0.23)	1.57*** (0.23)	0.43*** (0.16)	−0.18 (0.16)	0.15*** (0.05)	0.28*** (0.05)
ln_govt_budget	0.18* (0.10)	0.19** (0.09)	0.08 (0.06)	0.07 (0.06)	0.00 (0.02)	−0.02 (0.02)
ln_publications	0.28** (0.12)	0.25** (0.12)	0.17** (0.08)	0.17** (0.08)	0.12*** (0.03)	0.11*** (0.03)
Focus	—	−3.66*** (0.75)	—	0.26 (0.51)	—	−0.27 (0.19)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	—	Yes	—	Yes	—	Yes
Type of science dummies	—	Yes	—	Yes	—	Yes
Scientist-level controls	—	Yes	—	Yes	—	Yes
Method	Fixed effects	Random effects	Fixed effects	Random effects	Fixed effects	Random effects
N	380	380	380	380	310	310

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.

Notes: These regressions measure the impact of the reform on foreign patents filed by CSIR (ln_pat_filed_abr), domestic patents filed (ln_pat_filed_ind), and patent mix (ln_patent_mix). ln_patent_mix is log(1+US patents)/(1+Indian patents). The variable govt_budget represents budgetary support from the government and the variable publications_{it} measures year-wise number of publications. The post reform dummy is an indicator for years after 1999.We run both fixed effects and random effects models and then conduct a Hausman test to verify that the Random estimator cannot be ruled out as inconsistent.

Table 4 Panel regression results – Impact of domestic and foreign patents on revenue from multinationals

Independent variable	Dependent variable		
	1	2	3
	ln_revenue_MNCs	ln_revenue_MNCs	ln_revenue_MNCs
ln_pat_uscum	43.10***	85.50**	46.28**
(14.79)	(41.80)	(23.49)	
ln_pat_indcum	8.33	11.14	46.84
(22.59)	(36.96)	(52.18)	
ln_govt_budget	−25.04	−67.90	−17.71
	(16.02)	(30.83)	(22.84)
ln_publications	36.62* (20.35)	51.31 (38.13)	27.87 (30.93)
Year dummies	Yes	Yes	Yes
Lab covariates	Yes	Yes	Yes
Method	Fixed effects	Fixed effects	Fixed effects
Years	1995–2006	1995–1999	2000–2006
N	304	96	208

*Significant at the 10% level; **significant at the 5% level; ***significant at the 1% level.
Notes: The regressions measure the impact of the cumulative stock of domestic and foreign patents on revenue from foreign companies to CSIR (ln_revenue_MNCs). We use the cumulative stock of patents and not contemporaneous filings of patents, as licensing can be assumed to have a lead time of searching for the buyer and structuring the licensing deal and licensing could involve any patent in stock. ln_revenue_MNC is defined as ln(1+revenue_MNC). The variable govt_budget_support represents budgetary support from the government and the variable publications_{it} measures year-wise number of publications. Lab covariates include age.

the standard RDT (Pfeffer & Salancik, 1978) and its departure in the context of SOEs suggested by Vernon (1979) to posit that in the absence of privatization, SOEs could leverage global cash flows and their global footprint to seek resource independence from other state actors.

Our choice of Indian state-owned laboratories in the 1990s offers a convenient natural experiment to conduct our research. India's 1991 economic crisis led to an IMF-mandated reform process, and India's domestic patent system was reformed starting in 1999 under pressure from the IMF and the WTO. But, the economic crisis of 1991 concurrently created resource constraints for India's SOEs. Several SOEs were partially privatized; however, privatization was not an option for R&D labs such as the CSIR. As a result, CSIR labs tried to achieve resource independence by licensing foreign patents to MNCs. As a result, while India's domestic patent system was being reformed, India's premier R&D labs leveraged the PCT option of domestic patent reform and moved their patent filing to foreign patents; licensing revenue from MNCs reacted positively to foreign, but not domestic, patent filings.

Our results also have implications for the SOE efficiency improvement and privatization literature. Earlier in the paper, we outlined the ambitious Indian SOE

Table 5 Comparison of CSIR labs to other Indian SOEs and private entities

Independent variable	Dependent variable: ln_US_patents_granted					
	Sample: CSIR labs, all other public R&D labs and public universities		Sample: CSIR labs and all private Indian firms		Sample: CSIR labs and all state-owned firms	
	(1)	(2)	(3)	(4)	(5)	(6)
entity_is_CSIRlab	—	1.75** (0.81)	—	1.75* (1.02)	—	1.71** (0.87)
post96*entity_CSIRlab	1.84*** (0.02)	1.84** (0.89)	1.83*** (0.02)	1.83** (0.89)	1.73*** (0.10)	1.73** (0.82)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	533	533	2041	2041	117	117
Model	Fixed effects	Random effects	Fixed effects	Random effects	Fixed effects	Random effects

*Significant at the 10% level; **significant at the 5% level;***significant at the 1% level.

Notes: This table reports results of difference in difference regressions that compare US patents granted with CSIR labs with other Indian entities. We had to use patents granted and not patents filed (unlike Table 3), as we know only the patents granted to non-CSIR entities. Models 1 and 2 compare CSIR labs with other Indian public R&D labs and universities; Models 3 and 4 compare CSIR labs with Indian private firms; Models 5 and 6 compare CSIR labs with Indian state-owned enterprise. The analysis is done for baseline year 1996 (first full year of Mashelkar's tenure as the director general of CSIR). Similar results, not reported here are obtained for dummy year 1999 (midpoint of Mashelkar's regime). Models 1, 3, and 5 are fixed effects and Models 2, 4, and 6 are random effects/difference in difference models. For each patent, we code the variable "ownership", and we code 1640 US patents (1994–2005). Heteroskedasticity-consistent standard errors reported within parentheses.

privatization program studied by Gupta (2005). This program intended to reduce government ownership to a bare minimum of 26% in all applicable Indian SOEs. However, to quote Gupta (2005: 991), "In the decade following the launch of the privatization program, the government sold minority shares through a variety of methods including auctions and public offerings in domestic markets, and through global depository receipts in international markets. However, through 1999 the federal government sold an average of just 19.2% of equity in 40 of 258 industrial, financial, and service sector firms and majority stakes in none. Euphemistically referred to as "disinvestment", privatization has proven to be very difficult to implement". In this context, we offer an alternative/complementary mechanism to privatization – for R&D-oriented SOEs, filing foreign patents and licensing the same to MNCs might create a cash flow stream independent of government budgetary support. In India and across emerging markets, SOEs continue to comprise a large proportion of industrial sales, yet lag private counterparts on performance measures. Analysis included in the Appendix suggests that in 2007, 30% of firm sales in India were with state-owned firms; this was, in fact, an increase from the 27% share of sales that SOEs had in 1991, the year the ambitious privatization program was initiated. Our analysis also suggests that state-owned firms continue to lag their private counterparts in performance (Tobin's q) and R&D investment (R&D to sales ratio).

Other Contributions

We also provide a theoretical explanation for why R&D-focused SOEs, in an attempt to secure resource independence from government budgetary support, might not react positively to a domestic patent reform and may not disproportionately file more domestic patents. Instead of increasing domestic patent filings post reform, such SOEs might increase foreign patent filings in an attempt to license high-quality foreign patents to MNCs and, thus, secure resource independence from government budgetary support. Seeking resource independence from other state actors may help explain the long-standing null or negative result of domestic patent reform in emerging markets (Allred & Park, 2007; Branstetter et al., 2006; Lerner, 2002; Sakakibara & Branstetter, 2001). If the domestic patent reform and the need for resource independence of SOEs are both triggered by a common economic shock, then despite domestic patent reform, R&D-focused SOEs could move their patenting focus to foreign patents in an attempt to license such foreign patents to MNCs.

Our results have implications for the globalization of resources and markets of emerging market entities (Khanna et al., 2010). In this literature, Chittoor, Sarkar, Ray, and Aulakh (2009) document how Indian pharmaceutical companies went through a global transformation led by resource and market globalization. Similar to our findings, the authors find that the Indian pharmaceutical firms moved from a phase of imitation to developing products that were patentable; filing global patents, in turn, increased their need for more innovative technology to assist them in product discovery. Our results also relate to the emerging literature in

international business that focuses on the disaggregated nature of the state. In our context, while the bureaucrats responsible for the Indian domestic patent reform intended more domestic patent filings, the managers of the CSIR labs were concurrently filing higher numbers of foreign patents in an attempt to create a cash flow stream independent of government budgetary support. This is in line with Henisz and Zelner (2010), who outline the disaggregated structure of political actors in emerging markets. The core-periphery framework in Choudhury, Geraghty, and Khanna (2012) also outlines the disaggregated nature of state actors in emerging markets; the framework documents how different "core" state actors might differ in their incentives toward a focal policy and how MNCs engaging with peripheral actors such as state R&D labs might help core state actors align their incentives.

In conclusion, we believe our findings are relevant to SOEs around the world, which are dependent on varying degrees of government budgetary support and government control. Our findings are directly relevant to state-owned R&D entities across emerging markets – a few examples of such entities being Embrapa and Fiocruz in Brazil, the Indian Council of Medical Research, and the CSIR in South Africa. Our findings are also widely relevant to SOEs that have IP that could be licensed to create a cash flow stream independent of government budgetary support. In a more general way, our main theoretical proposition is also relevant for SOEs that acquire/create assets in foreign countries to create a cash flow stream independent of their home-country government control. A case in point here is Petróleos de Venezuela S.A. (PVDSA), a Venezuelan SOE acquiring ownership of Houston-based CITGO. PVDSA acquired 50% ownership in CITGO in 1986 and acquired the remaining half of CITGO in January 1990; arguably this acquisition created a cash flow stream for PVDSA independent of other state actors in Venezuela.

Appendix

Table A1 Comparison of Indian SOEs and domestic private firms, 1991 and 2007

	1991		2007	
	SOE	Private domestic	SOE	Private domestic
Number of firms	176	2630	244	5074
Percentage of total sales(%)	27	73	30	70
Percentage of total assets(%)	34	66	31	69
R&D to sales ratio(%)	0.02	0.02	0.18	0.52
q ratio	0.25	0.7	2.12	14.44

Notes: This table compares number of firms, R&D with sales ratio, and Tobin's (*q*-ratio) for Indian SOEs and domestic private firms in year 1991 and year 2007. The table also compares the percentage of total industry sales (Percentage of total sales) and percentage of total industry assets (Percentage of total assets) in the SOE and domestic private sector in years 1991 and 2007. The year 1991 is chosen to indicate the beginning of the Indian government disinvestment/privatization program. Year 2007 indicates the end of the time period of the current study.

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Varieties in State Capitalism: Outward FDI Strategies of Central and Local State-Owned Enterprises from Emerging Economy Countries

Ming Hua Li, Lin Cui and Jiangyong Lu

Introduction

In a competitive global economy, emerging economy countries are increasingly promoting the international expansion of their state-owned enterprises (SOEs). At the same time, successive waves of institutional reforms have spawned widespread corporate transformation in these countries, substantively reshaping fundamental mechanisms in which such SOEs are governed and organized. The creative destruction and reform of institutional systems unfolding through administrative and fiscal decentralization, market liberalization, and industrial restructuring has unleashed sweeping changes among firms including SOEs (Aulakh & Kotabe, 2008; Dacin, Goodstein, & Scott, 2002).While considerable research has examined how institutional reforms shape firm behavior and corporate governance through ownership restructuring in emerging economies (Cuervo & Villalonga, 2000; Domadenik, Prašnikar, & Svejnar, 2008; Murrell, 2003; Newman, 2000; Peng & Heath, 1996), relatively less attention has focused on how the underlying patterns of control over SOEs exercised by different levels of state government are simultaneously being reconfigured through reforms which in turn redefine SOEs' strategic motivations and institutional resources for internationalization.

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Reflecting a shift in the underlying political economy of a country, reforms involve the recombining of old and new institutional elements into hybrid constellations which contribute to greater internal diversity in an economy (Aoki, Jackson, & Miyajima, 2007; Jackson & Deeg, 2008; Lane & Wood, 2009; Ostrom, 2005; Wei, 2007). Such fragmentation may result in the existence of micro-institutional environments characterized by diverse modes of economic coordination (Crouch, 2005; Lane & Wood, 2012). As a result, institutional change is not simply a homogenous time-related process (Kim, Kim, & Hoskisson, 2010; Tan, 2007), but a complex organic phenomenon that may involve multiple, discontinuous, and possibly divergent experimental processes arising from interactions between firms and their surrounding institutional environment. Such diversity within countries has been recognized as an outcome of institutional transition especially when more coordinated economic systems liberalize (Jackson & Deeg, 2008; Lane, 2005) and is increasingly referred to as "diversity in capitalism" which extends traditional assumptions of comparative capitalism to account for a more dynamic understanding of institutions (Crouch, 2005; Lane & Wood, 2009; Streeck & Thelen, 2005).

In the context of emerging economies undergoing rapid and profound institutional change, diversity in capitalism has significant implications for the evolution of state capitalism since SOEs which undergo heterogeneous reform treatments may evolve along different developmental pathways. Organizational diversity among SOEs can emerge through various means.[1] An assortment of distinct reforms can be implemented at each level of government, exerting differential impacts on SOEs' internal restructuring, strategic flexibility and access to resources. Efforts to restructure management control over some SOEs by shifting their oversight between various agencies and bureaus can also influence their objectives and incentives. In essence, not all SOEs follow similar patterns of organizational change which provides the basis for our primary research questions. How do key institutional change processes in emerging economies facilitate institutional diversity within national business systems and how is this diversity instantiated among SOEs affiliated at different government levels? What implications does the emergence of varieties in state capitalism hold for SOEs' foreign direct investment (FDI) strategies?

Turning our attention to emerging economies which are gradually shifting from their reliance on centrally directed forms of economic coordination toward more decentralized, market-based approaches we examine how various types of reform can catalyze diversity among SOEs. We elaborate a trickledown theoretical framework that connects the impacts of macro-level institutional reforms to the dynamic transition and differentiation of SOEs at the organizational field level, which exert substantial implications on their firm-level FDI strategic choices. We do so by applying and linking macro- and micro-level institutional arguments developed in the comparative capitalisms and sociological institutional theory literatures.

[1]We use the term "heterogeneity" and "diversity" interchangeably in this paper.

To develop theory that links macro-level institutional reform to field-level SOE diversity, we draw from comparative capitalisms (Hall & Soskice, 2001; Jackson & Deeg, 2008) and diversity in capitalism (Crouch, 2005; Lane & Wood, 2009) theory to explain how as the institutional architecture of these countries is resynchronized to support a competitive market environment, large-scale reforms (i.e., administrative decentralization, fiscal decentralization, industrial reorganization, market liberalization) operate to redefine the strategic coordination between various levels of government, reassigning different resources, priorities, and institutional logics among them. Since SOEs affiliated at different government levels constitute an intrinsic part of the state capitalist system, they are necessarily subject to diverse restructuring regimes refracted through these macro-institutional changes which endow them with similar features, resources, and institutional logics characterizing their associated government owners. Our approach is motivated by research in sociological institutionalism (Haveman & Rao, 2006; Thornton, Jones, & Kury, 2005) which explores the nature and manner in which institutional logics and internal organizational dynamics shift within firms as a response to institutional change. Specifically we examine how reforms can induce greater heterogeneity within the institutional fields of SOEs associated with central and local levels of government and exert differential isomorphic pressures on their behavior.[2]

In order to illustrate how field-level SOE diversity leads to differing firm-level FDI strategies, we draw from sociological perspectives on institutional theory (DiMaggio, 1997; DiMaggio & Powell, 1991; Scott, 2004) to elucidate how institutionally derived organizational differences with respect to resources, logics, and behavior between SOEs affiliated with central and local governments (referred to as central and local SOEs hereinafter) can motivate them to pursue varying FDI approaches. We propose that reforms such as fiscal decentralization and market liberalization encourage local SOEs to acquire greater managerial autonomy and market orientation which imbue them with a stronger commercial logic to pursue development goals set by local governments. On the other hand, central SOEs have experienced increasing consolidation to convert them into national policy instruments for sustaining macro-level growth and national industrial policies. Such differentiation in the institutional logics of local and central SOEs brings about disparity in home country expectations for their FDI activities and triggers different reactions and legitimacy challenges raised by host governments.

For instance, local and central SOEs may be propelled to adopt different strategic prerogatives in their FDI strategy, with local SOEs going abroad primarily for rent-seeking purposes to satisfy local fiscal needs while central SOEs invest overseas to fulfill national policy objectives. Their diverging motives for going

[2]The term "central government" refers to the highest level of government and is used interchangeably with "federal government" and "national government" while the term "local government" is applied to provincial or municipal levels of government. Most studies on decentralization typically examine the evolving relationship between central and local levels of government which is why we focus our analysis on these two levels of government.

abroad will elicit different responses from host governments which may perceive them as credible business partners or as potential rivals that may pose a threat to host national interests. Through linking our theoretical efforts to identify the institutional sources of SOE diversity and how such diversity is reflected in central and local SOEs' FDI legitimization challenges in home and host countries, we develop an overarching theoretical framework highlighting the trickle-down effects of macro-institutional reforms on SOEs' FDI strategies, substantiated by a number of propositions for future empirical validation.

Our approach raises important implications for research on SOEs' internationalization. By dissecting the impact of institutional change at different levels of government ownership, we adopt a more nuanced approach to analyze how variation in key reform processes unfolding at these levels can fundamentally alter the constellation of institutional logics and pattern of resource allocation that determine SOEs' organizational behavior. Our study delves beneath the surface of SOEs to show how reforms are reshaping their internal structure in alignment with modifications in the overall system of economic coordination in emerging economies. Through extending the theoretical lens of diversity in capitalism to varieties in state capitalism, we contextualize the differential impacts of institutional change on SOEs' internationalization strategies. We delineate how SOEs' roles may have evolved along different trajectories of reform and as government vehicles of international business activity they may not share the same objectives or capabilities for going abroad.

Our paper proceeds as follows. We first synthesize key insights from the comparative capitalism literatures, especially the works on diversity in capitalism, to develop a conceptual framework capturing the effects of different institutional change processes on the evolution of central and local SOEs. Second, we derive four distinct constructs mapping characteristic differences between central and local SOEs as a result of such institutional changes which we systematically link to their varying abilities to satisfy home country and host country legitimacy requirements when investing overseas. Third, by elaborating on how these different capabilities may be reflected in different FDI strategies, we derive testable propositions for our model and conclude with a discussion summarizing our contributions, future research directions, and practical implications for policymakers and managers of aspiring state-owned multinationals.

Institutional Change and Varieties in State Capitalism

To reinvigorate and deepen the existing scope of theorizing on globalization of state-owned multinationals, we advance an "institutions-as-configurations" approach (Greenwood & Hinings, 1996; Jackson & Deeg, 2008) to capture how a combination of interrelated reforms unfolding in emerging economies can collectively reshape and retool the capabilities and strategic objectives of their SOEs for overseas venturing. Adopting a configurational perspective to study how institutional change generates diversity among SOEs contributes to our understanding of their behavior in three unique ways. First, it provides

theoretical insight for broadening our appreciation of the variety of macro-level reform processes which exert assorted influences on SOEs that guide their evolution into diverse actors. Second, by showing the patterned ways in which reforms can lead to variation in SOEs' attributes and behavior, we aspire to develop a more nuanced and dynamic approach to theorizing about the relationship between SOEs and their principals, namely their affiliated government owners which may exhibit different priorities when venturing overseas. Last, through exposing pivotal differences in the salient traits, internal governance, and strategic prerogatives of SOEs, we identify certain prominent characteristics among them which have far-reaching consequences for their cross-border investment activities. Overall, the configurational approach allows us to explore the dynamic interplay between multiple institutional change processes and SOEs' strategic organizational evolution, thereby contributing to research on complex interactions between institutions and SOEs, as opposed to the variable-based approach that mainly aims to isolate singular effects of particular reforms on SOEs' behavior (i.e., regulatory shocks) which has been the prevailing approach in existing studies (Ralston, Terpstra-Tong, Terpstra, Wang, & Egri, 2006; Uhlenbruck, Meyer, & Hitt, 2003). Departing from this approach, we dedicate attention to the multifarious ways in which state-owned players' resources, priorities, and capabilities are re-bundled and customized through heterogeneous reforms which imbue them with varying mandates and strategic abilities for going abroad.

Incorporating a configurational approach to institutionalism explains not only the existence of institutional varieties but also the disequilibrium and dynamic processes that create such varieties. While the manifestation and economic rationale of typologies of national business systems (i.e., institutional varieties) is the focus of the comparative capitalism literature (Aoki, 1994; Hall & Soskice, 2001; Hancke, Rhodes, & Thatcher, 2007; Jackson & Deeg, 2008), it is the recognition of the fluidity of institutional arrangements due to asymmetrical and idiosyncratic patterns of institutional change that has stimulated the emergence of "diversity in capitalism" (Crouch, 2005; Lane & Wood, 2012; Streeck & Thelen, 2005). This latter literature highlights the multitude of different change processes which lead to the hybridization or fragmentation of existing institutional arrangements within seemingly coherent national contexts to create internal diversity which offers an appropriate theoretical starting point for us to understand the emergence of varieties in state capitalism.

Focusing on the consequences of institutional change processes within a configurational framework, we explore the phenomenon of varieties in state capitalism across levels of governments. Specifically, we examine how the recalibration of local and central institutional structures through reforms in emerging economies can lead to mixed modes of coordination where direct intervention from the central government is gradually phased out as local governments take a more proactive approach to market coordination. The outcome is a hybridized market system integrating both aspects of market competition with inherited elements of central planning. As the underlying logics of economic coordination are renegotiated, new

institutional complementarities may emerge between different levels of government. The central government may withdraw from certain industries but continue to coordinate key strategic sectors to promote coherent national growth while enabling local governments to guide their regional economies toward a market-oriented development scheme. Such a hybridized system is characterized by the embodiment and integration of multiple institutional logics reflecting the mixing of old and new modes of coordination which engender coevolution and increasing plurality in the institutional environment.

Motivated by the idea that institutional change can trigger evolution of the identity and strategic interests of firms (Campbell, 2004; Dacin et al., 2002; Jackson & Deeg, 2008) we argue that varying internal changes unfolding within institutional subsystems can reshape the organizational characteristics, institutional logics, and strategic priorities of SOEs along different trajectories, giving rise to visibly distinct varieties in state capitalism which bear direct consequences for SOEs' strategic behavior abroad. As emerging economy governments remodel their institutional architecture to gradually loosen the central government's monopoly over the coordination of the economy, decisions must be made regarding the extent of economic coordination the central government prefers to retain, the kinds of economic activities and sectors from which it intends to relinquish control, and which actors – local governments or private sector – should coordinate those sectors which are no longer under its direct oversight. Realigning priorities and roles among government actors through reforms alters the "functional interactions" (Jackson & Deeg, 2008: 553) between them and is instrumental to modifying existing institutionalized arrangements to support new modes of economic coordination across different domains. SOEs reorganized under such new modes of coordination will increasingly respond to new incentive mechanisms and policy goals and thus evolve new strategic agendas for overseas venturing.

Introducing market-based competition involves broadening the scope of participation in economic activities by local governments as well as their SOEs. In many emerging economies undergoing gradual reforms with the exception of certain countries such as Russia, Yugoslavia, Mexico, and Brazil which pursued sudden and profound privatization, the government attempts to reduce the inefficiencies of central planning by reforming the state sector and transferring authority to lower levels of government to run their SOEs more autonomously. Inefficient SOEs which are less capable of withstanding increased competition due to liberalization are privatized to minimize losses. At the same time, the central state may keep its control over certain SOEs which operate in strategically sensitive sectors such as natural gas, infrastructure, and mining to sustain the overall economy. Logically it follows that not all SOEs would receive the same reform treatments, with some SOEs being subject to specific reforms intended to transform them into increasingly autonomous commercial players while other SOEs are restructured to retain monopolistic dominance over strategic sectors for serving other key policy objectives.

As noted earlier, our theoretical framework is subject to certain boundary conditions applicable to emerging economies that have not experienced rapid and extensive privatization which led to wholesale withdrawal of government

participation in the economy to an extent that would represent a limitation to this study. The scope of our paper focuses on countries that continue to be characterized by an active state sector which are increasingly adopting federal systems of governance where political and economic decentralization are gaining prevalence. This boundary condition encompasses both transition economies with command economy heritage and pluralistic states which increasingly adhere to a market-based economic governance system. Table 1 summarizes the key salient features of emerging economies that apply to our theoretical development including a list of terms and designations for central and local SOEs in various countries since they are classified under different nomenclatures based on historical precedents.

Figure 1 illustrates the two dimensions of institutional change which have important implications on the progressive development of SOEs in emerging economies. In Fig. 1, the vertical dimension captures the change of the locus of economic policy power in a country, typically through the process of political decentralization where power shifts from central to local level governments. The horizontal dimension captures the change in the degree of state coordination of national economy, which is achieved by economic decentralization reflected in market liberalization and industrial restructuring efforts of the government toward a more market-coordinated economy. Overall, the framework depicts how as the state shifts from a centrally directed system of economic coordination toward a more liberal market-based coordination approach, SOEs under local and central governments begin to diverge with respect to their strategic priorities and organizational characteristics.

Vertical Institutional Change Processes

As shown in Fig. 1, the vertical dimension reflects the change in the distribution of political authority (i.e., who coordinates) in a country and primarily involves two interrelated processes of political decentralization – administrative decentralization and fiscal decentralization – whereby the central government devolves greater responsibility to local governments to make their own policy decisions and raise their own revenues. The transfer of management and decision-making authority to local governments through administrative decentralization enables them to exercise greater discretion in the design and execution of local development policies. Studies have shown that the successful ability of local governments in Vietnam to initiate experimental projects such as special export processing and industrial development zones to attract businesses and inward FDI have increased their independence from central authorities, creating additional justification for reforms which further enhance local autonomy (Malesky, 2008). Administrative decentralization therefore enables local governments to run their SOEs more freely. In other countries such as China, despite the prevalence of a top-down authoritarian governmental structure where power emanated from the center, local governments exercised a highly entrepreneurial approach to solving economic development issues which gained recognition from the central government during the 1980s (Caulfield, 2006). Their successful initiatives eventually led the central government to devolve a wider range of economic

Table 1 State ownership patterns in selected emerging economies

Country	Classification and designation of central and local SOEs		Boundary conditions
	Central SOEs	Local SOEs	
China	Central SOEs are under the direct control of the State-owned Assets Supervision and Administration Commission of the national State Council	Local SOEs are under the direct control of the State-owned Assets Supervision and Administration Commission of provincial and municipal governments	Transition economy system characterized by political and economic decentralization with gradual privatization
India	Central SOEs are referred to as Central Public Sector Enterprises (CPSEs) or Central Public Sector Units (CPSUs) designated under the direct control of the Ministry of Heavy Industries & Public Enterprises	Local SOEs are referred to as State Level Public Sector Enterprises (SLPEs) or State Level Public Sector Unit (SLPSUs) under the direct control of provincial governments	Pluralistic governance system characterized by political and economic decentralization with gradual privatization
Indonesia	Central SOEs are referred to as Badan Usaha Milik Negara (BUMNs) which designated under the direct control of the Ministry of State Owned Enterprises	Local SOEs are referred to as Badan Usaha Milik Daerah (BUMDs) which are designated under the direct control of provincial and municipal governments	Pluralistic governance system characterized by political and economic decentralization with gradual privatization
Malaysia	Central SOEs are referred to as Government Linked Companies (GLCs) under the control of the Ministry of Finance and five Federal Government Linked Companies (GLICs) which invest for the central government	Local SOEs are referred to as State Government Linked Companies (SGLCs) under the direct control the State Economic Development Corporations (SEDCs) which serve as investment arms for provincial governments	Pluralistic governance system characterized by political and economic decentralization with gradual privatization
South Africa	Central SOEs are referred to as National Public Entities (NPEs) or National Government Business Enterprise (NGBEs) under the direct supervision of the national Department of Public Enterprises	Local SOEs are referred to as Provincial Public Entities (PBEs) or Provincial Government Business Enterprises (PGBEs) which are under the direct supervision of provincial and municipal governments	Pluralistic governance system characterized by political and economic decentralization with gradual privatization

Table 1 continued

Country	Classification and designation of central and local SOEs		Boundary conditions
	Central SOEs	Local SOEs	
Vietnam	Central SOEs are referred to as State-owned Economic Groups (SEGs) designated under the control of various line ministries under the supervision of the Prime Minister	Local SOEs are designated under the control of the People's Committees of provincial and municipal governments. They are referred to directly as Local SOEs	Transition economy system characterized by political and economic decentralization with gradual privatization

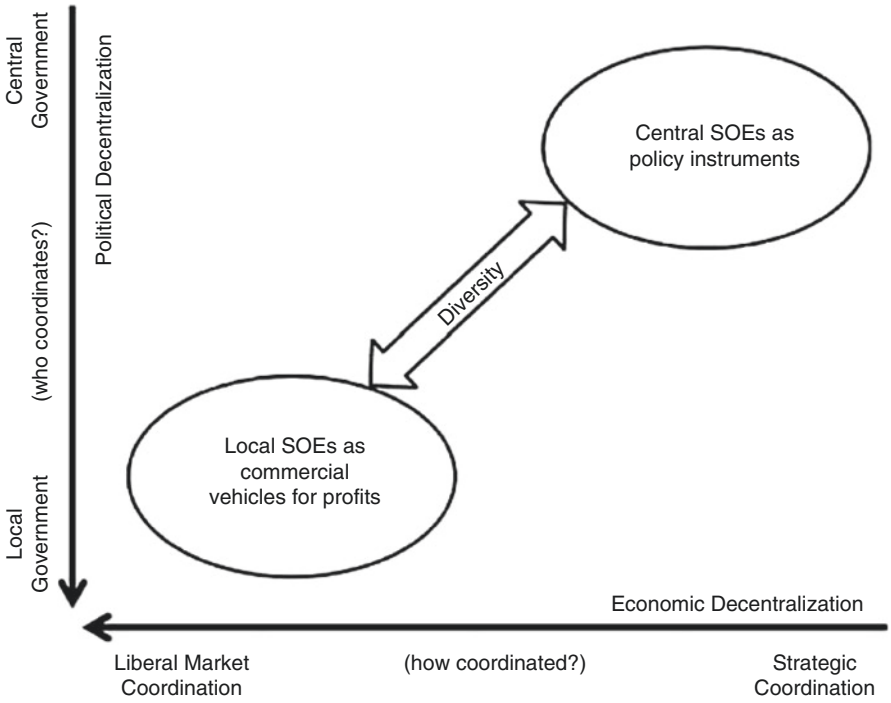

Fig. 1 Institutional change processes and SOE diversity in emerging economies

responsibilities covering a broad spectrum of activities including investment, land use, banking, and management of SOEs to local governments which further strengthened their independent growth incentives (Chien, 2006).

The financial incentive for local governments to promote growth and encourage their local SOEs to perform is further reinforced by fiscal decentralization which enables local governments to keep a share of SOE revenues and profits. In addition to China, India's

administrative and fiscal system, characterized by one of the highest decentralization ratios in the world, has become even more decentralized in recent years (Purfield, 2004). In 1999, Indonesia also began embarking on an ambitious decentralization scheme to strengthen both local fiscal and administrative autonomy (Ahmad & Mansoor, 2002). The importance of this reform initiative is underscored by the government's plans to emphasize its enhanced implementation in Indonesia's national mid-term development plan for 2010–2014 (Ministry of National Development Planning, 2010). Over the past two decades, provincial governments in many emerging economies have gained significant autonomy to run their local SOEs, which are more numerous compared with central SOEs. In India, for example, the number of central SOEs is limited to about 200 enterprises while local SOEs comprise 800–1000 firms (Mishra, 2009). Indonesia has also seen the establishment of several hundred local SOEs while central SOEs are restricted to 140 firms in total (OECD, 2000).

As the trend of political decentralization continues, local SOEs will increasingly play a substantial role in generating revenues which also contributes to local governments' ability to consolidate their decision-making autonomy. Furthermore, local governments have been tasked to privatize smaller underperforming local SOEs or convert them into corporatized entities with majority state ownership (Ishizuka, 2009; Yusuf & Nabeshima, 2008). As a result, local SOEs, whether majority or wholly owned by the government exhibit relatively greater strategic versatility and responsiveness compared with central SOEs which remain tightly regulated and responsible for serving national strategic interests. Central SOEs' obligation to fulfill public service obligations may restrain their flexibility and their investments are subject to extra supervisory oversight, reducing their ability to respond freely to shifting market conditions. Therefore we propose:

> **Proposition 1:** The greater the degree of administrative decentralization in a country, the higher the level of managerial autonomy of local SOEs relative to central SOEs.

In addition to granting local governments greater autonomy to set production targets and deploy contract-based incentive schemes for SOEs so that they can act more entrepreneurially, central governments have also made them more responsible for their own fiscal performance. During the 1990s fiscal decentralization was among the most widespread reforms among developing economies (Smoke, 2001). While fiscal decentralization can vary substantially in its implementation across countries, one important objective has been to empower local governments to collect revenues and make expenditures to promote local economic development and policy objectives (Lin & Liu, 2000; Smoke, 2001). In exchange for the right to keep locally raised revenues including a share of SOE profits for their own purposes, local governments are obligated to cover a large portion of their expenditures for public services, infrastructure development, and investment in local SOEs. Consequently, fiscal decentralization serves a dual purpose to both motivate local governments to improve performance of their SOEs to maximize revenues while also introducing hard budget constraints which limit local SOEs' access to central government financial backing (Park, Li, & Tse, 2006). From this perspective, local governments are more restricted in the resources they can provide to

local SOEs since extra expenditures beyond their budgetary capability require further approvals by the central government. Therefore we propose:

> **Proposition 2:** The greater the degree of fiscal decentralization in a country, the lower the extent of institutional support received by local SOEs compared with central SOEs.

Horizontal Institutional Change Processes

The horizontal dimension of the framework in Fig. 1 captures change in the degree of state coordination over economic activities (i.e., how coordinated) in a country as various sectors are gradually deregulated and liberalized to promote competition among firms including SOEs, private companies, and foreign multinationals. By opening domestic markets to foreign and private investors and abandoning import substitution policies, states must balance between their economic, political, and social priorities to decide which industries to liberalize and the extent it wishes to divest control (Doh, 2000; Doh, Teegen, & Mudambi, 2004). While emerging economy governments have actively welcomed inward FDI to bolster domestic economic growth, they remain keen to maintain their bargaining power by reserving control over selective "strategic industries" which remain restricted to competition (Doh et al., 2004; Park et al., 2006). Therefore the loosening of state dominance over its economy by decentralizing its economic coordination functions comprises two parallel sub-processes – industrial restructuring and market liberalization – whereby the central government reasserts strategic control over key industrial sectors by consolidating central SOEs in those industries into large "champion" firms while devolving economic control over non-strategic industries such as manufacturing and services to local SOEs, foreign entrants, and private firms which are allowed to play more active roles. The resulting outcome is a gradual shift from strategic coordination toward liberal market coordination in most sectors of the economy.

Despite efforts to dismantle entry barriers to a wide array of industries, central SOEs in many emerging economies remain shielded from competition. Aiming to preserve control over strategic sectors to advance its national interest, the central state often carves out monopolies reserved for central SOEs or restricts private participation in these sectors to a minimal level. In both Vietnam and China, for example, central SOEs have been structured into large enterprise conglomerates bounded together by interlocking directorates, cross subsidization, intragroup trade, and cross shareholding (Child & Tse, 2001; Kim, Nam & Cuong, 2010). This business group structure enables the creation of internal markets facilitating intra-group transactions such as risk-pooling, technology sharing, internal trading of intermediate goods, and rotation of management personnel (Ma, Yao, & Xi, 2006; Yiu, 2011) which further reinforces monopolistic tendencies. Similarly, Indonesia established a Ministry of State Owned Enterprises in 1998 with the goal to merge the assets of existing central SOEs and upsize them into concentrated sectoral holding companies with multiple layers of sub-holding companies and smaller affiliated firms (Abubakar, 2010; Fitriningrum, 2008). In addition to this growing conglomeration pattern, central SOEs also enjoy the implicit guarantee

and support of the central government through various preferential policies including cheap access to credit. For example, central SOEs in Vietnam account for over 46% of all liabilities held by enterprises surveyed in a 2009 census organized by the General Statistics Office (Malesky, 2009). Such disproportionate privileges are not readily accessible by other firms including local SOEs and private companies.

From an industrial standpoint, the concentration of national resources into large corporate groups provides the "big push" needed to resurrect moribund industries and to coordinate growth across diverse industries (Morck & Nakamura, 2007) which transforms them into "state instruments for national welfare based on corporate practices" (Abubakar, 2010: 10). In other words, central SOEs are being reorganized by central governments to serve as policy instruments supporting macro-level growth and overall productivity of domestic firms through the steady provision of natural resources, raw materials, technologies, and energy whereas local SOEs typically do not hold such policy responsibilities and are therefore less likely to claim monopolistic positions. This is consistent with studies (Mowery & Nelson, 1999; Murtha & Lenway, 1994) which argue that governments have a strategic prerogative to deploy national industrial strategies and establish a basis from which domestic firms can build their competitive advantages. Therefore we propose:

> **Proposition 3:** The greater the degree of industrial restructuring and consolidation in a country, the lower the level of monopoly power of local SOEs relative to central SOEs.

Compared with central SOEs which largely operate as policy instruments and hold privileged monopoly positions, local SOEs mostly occupy the nonstrategic sectors which were deregulated and liberalized to enable private and foreign participation such as manufacturing and services sectors (Malesky, 2009). Navigating an increasingly dynamic market characterized by surges in the entry of highly profit-driven firms has important consequences on the organizational logic and structure of local SOEs. Recent empirical research which evaluated the sources of public sector inefficiency in Indonesia has found that market liberalizing reforms which elevate competitiveness in the overall business environment by encouraging foreign ownership, reductions in trade barriers, and greater constraints on government subsidized investments were responsible for substantial improvements in SOEs' productivity growth (Bartel & Harrison, 2005). Subjected to the discipline of the market, a significant portion of underperforming local SOEs has also been completely or partially privatized in many emerging economies. Many were simply dissolved or transferred to workers' collectives. In Vietnam, the number of local SOEs has been continuously reduced, although the total capital in the local SOE sector has increased to provide surviving firms with more resources to strengthen their competitiveness (Ishizuka, 2009).

As a result, most remaining local SOEs comprise firms which evolved new dynamic capabilities to handle the challenges of a competitive market environment. By adapting more swiftly to market uncertainties characterized by unstable shifts in

market demand, disruptive product innovations, and entry of new foreign competitors, local SOEs are incentivized to invest more efforts to acquire market information, develop product differentiation strategies, improve customer service, and engage in strategic planning. This shift toward market orientation in response to environmental turbulence has been discussed variously in the business literature (Baker & Sinkula, 1999; Jaworski & Kohli, 1993; Santos-Vijande, Sanzo-Perez, Alvarez-Gonzalez, & Vasquez-Casielles, 2005; Slater & Narver, 1995) as being vital to enhance organizational learning, managerial flexibility, and acquisition of sustainable competitive advantage. Given that local SOEs are exposed to higher levels of market competition and serve as commercial vehicles for generating profits for local governments, we propose:

> **Proposition 4:** The greater the degree of market liberalization in a country, the higher the level of market orientation of local SOEs relative to central SOEs.

Taking a holistic view of institutional changes along both vertical and horizontal dimensions enriches our understanding of how institutional reforms can reshape central and local SOEs into actors with diverse agendas by re-bundling their matrix of resources, strategic priorities, and capabilities at different levels of government. Theoretically this is an important issue since rather than viewing institutions as "variables" or separate elements, our approach proposes that subsequent recalibration of institutions as configurations through reforms "give rise not just to differences in degree, but to fundamental differences in kind" (Jackson & Deeg, 2008: 545). Reforms operate to modify the pattern of interdependence among institutions by realigning and reconciling their priorities, addressing coordination gaps, and reducing their imperfections. The strategic renegotiation of coordination between central and local governments ushers in the recalibration of institutional logics, organizational structures, and resources at the field level of the state sector as it adjusts to ongoing structural transition in the political economies of emerging economy countries. The accompanying rise of diversity in state capitalism builds upon central and local governments' evolving institutional complementarities and translates into creation of new comparative institutional advantages for local and central SOEs to engage in different kinds of economic activity. For example, central SOEs dominating strategic industries are able to produce at more socially optimal price levels for critical public goods and raw materials needed to spur the acceleration of market development spearheaded by private firms and local SOEs in downstream industries. Their obligation to advance national industrial and welfare priorities may lead them to operate from a stronger politically laden and non-commercial logic compared with local SOEs which are increasingly profit-driven to serve local economic development objectives. This interdependency perspective is supported by theories developed in the literature on organizational configurations (Meyer, Tsui, & Hinings, 1993) and increasingly applied in other fields such as corporate governance (Aguilera, Desender, & Kabbach de Castro, 2012) to advocate for a more holistic approach for examining how changing interactions among organizational actors can create new patterns of coordination and behavior within groups.

Implications of Varieties in State Capitalism for SOEs' FDI Strategies

As agents of the state, SOEs are embedded in a political and social environment that extends beyond purely strategic and economic considerations. They must respond to home and host countries' institutional demands which exert pressure on them to mobilize organizational legitimacy for their international activities (Cui & Jiang, 2012). On the one hand, SOEs are obliged to fulfill certain home country government priorities such as acquiring key technologies and natural resources necessary for national development to legitimize their reasons for conducting FDI (Luo, Xue, & Han, 2010). However, they must also seek host country acceptance when they enter foreign markets. Previous studies have highlighted the importance of firms adopting conforming behaviors to cultivate host country legitimacy as a means to overcome political opposition in host markets (Kostova & Zaheer, 1999; Lu & Xu, 2006). Other studies have also found that firm responses to host country institutional environments may be reflected in their FDI ownership strategy (Lu, 2002; Xu & Shenkar, 2002). Presently, there is limited theoretical understanding on how different types of SOEs interact with competing domestic and foreign institutional pressures when they invest overseas.

By deriving a theoretical framework which elaborates the mechanisms through which large-scale institutional reforms induce stratification in the organizational field of SOEs leading to cleavages among them, we seek to articulate a new theoretical linkage between macro-level institutional changes contributing to diversity in state capitalism and micro-level SOE strategic choices reflected in their overseas venturing patterns. Variations in the level of SOEs' managerial autonomy, institutional support, monopoly power, and market orientation arising from macro-institutional changes signify a divergence in the institutionalized logics and expectations of roles held by local and central SOEs. Drawing from sociological institutionalism (DiMaggio & Powell, 1991; Hall & Taylor, 1996; Scott, 2004, Meyer & Rowan, 1977) which embraces a prescriptive approach to analyze how organizational actors conform to behavioral norms and rules established in their institutional environment to earn legitimacy for their continued survival, we develop a series of propositions elucidating how differences in the expected behavior of central and local SOEs along these four dimensions can transform the way they seek legitimacy from home and host governments. Our approach takes into consideration the distinctive attributes of central and local SOEs which we postulate motivate them to adopt differentiated legitimization strategies for outward FDI.

Institutional Legitimacy in Home Countries

Research into firms' internationalization strategies is increasingly focused on both home and external host legitimacy challenges faced by firms when they enter foreign markets (Kostova & Zaheer, 1999; Lu & Xu, 2006). Such issues are relevant for internationalizing SOEs as they expand their business to operate in multiple overseas institutional environments. In particular, obtaining home

institutional legitimacy is a crucial priority for SOEs since their survival is conditioned on sustained government access to valuable information and support. Such resource dependence exerts coercive pressure on SOE managers to meet government targets and priorities by establishing conforming routines and practices beyond purely economic mandates. Under circumstances where SOEs report to various government authorities with their own agendas and goals (Wang, Hong, Kafouros, & Wright, 2012), different tactical approaches may be employed by SOEs to obtain home organizational legitimacy. Moreover, central and local SOEs are not provided with the same level of institutional resources to fulfill their missions, which underscore their differing priorities (Sun, Mellahi, & Thun, 2010).

The different channels by which SOEs negotiate for home institutional legitimacy have implications for their choice of internationalization path. In exploring overseas, firms may follow a gradual internationalization path where they enter home-like foreign markets before venturing to psychically and institutionally distant locations (Johanson & Vahlne, 1977, 2009; Xu & Shenkar, 2002), or they can leapfrog stages and enter distant locations without accumulating significant *a priori* experiential knowledge or networks (Luo & Tung, 2007; Mathews & Zander, 2007). As "national champions", central SOEs derive a substantial part of their home institutional legitimacy by serving as policy instruments of central governments. Their monopoly privileges and high degree of institutional support are granted on the condition that they endeavor to serve certain national strategic goals (Luo et al., 2010; Yamakawa, Peng, & Deeds, 2008). In recent years, emerging economy governments have actively encouraged their central SOEs to accelerate their international expansion to secure important strategic assets and resources to strengthen national competitiveness (Kowalski, Büge, & Egeland, 2013; Zhang, Zhou, & Ebbers, 2011). Due to substantial home country push factors and preferential support, central SOEs from emerging market countries such as Bank of Brazil, SINOPEC of China, PETRONAS of Malaysia, and ONGC Videsh of India have leapfrogged to far-flung developed markets such as Australia, the United States, Canada, and Western Europe. Moreover, such firms may not be sent abroad for purely commercial reasons but rather for strategic purposes. They may expand abroad to project their growing political and economic power (Child & Rodrigues, 2005), establish a banking presence in distant financial centers such as New York or London to raise capital (Narula, 2012), set up R&D centers in advanced economies to acquire technical and tacit knowledge (Di Minin, Zhang, & Gammeltoft, 2012), or make passive investments in such countries to observe the decision-making processes of their invested subsidiaries (Shapiro & Globerman, 2012).

Meanwhile local SOEs are not obligated to fulfill government mandates to pursue the same strategic interests compared with central SOEs. Instead, they derive their home institutional legitimacy from maximizing rents for local government purposes. The combination of their market-pull orientation and less-privileged access to institutional resources encourages more profit-driven and risk adverse behaviors so they may delay entering unfamiliar advanced markets dominated by sophisticated competitors requiring significant upfront

investments which may reduce their short-term profits. By contrast, institutionally and psychically proximate countries offer more predictable business environments with lower entry barriers which enable local SOEs to accumulate and fine-tune their capabilities in preparation for penetrating more distant markets. Over the past two decades, various local emerging economy SOEs have deployed this strategy. Among them, Saigon Trading Group, a local company controlled by the Ho Chi Minh City government in Vietnam, signed a joint venture agreement in 2004 with Cambodia's SOKIMEX group to build a food processing factory in Cambodia before incorporating a subsidiary in the United States in 2007 and a representative office in Japan in 2009. Another local SOE Hisense from Qingdao Province in China entered South Africa as early as 1996 and established itself as a top consumer electronics brand in the country before moving to more developed markets such as the United States in 2001, Europe and Australia in 2006, and Canada in 2012. Similarly, PT Riau Airlines, a local Indonesian SOE owned by the Riau provincial government in Sumatra, registered its first foreign branch office in Malaysia after entering a cooperation agreement with a Malaysian tourism company in 2009 to initiate air services between Sumatra and Malaysia.

The relatively fewer institutional resources accessible to local SOEs may also incentivize them to operate with greater caution in foreign countries. While local SOEs may receive extra policy supports such as subsidies and bank loans, they lack the abundant pool of resources specifically reserved for central SOEs to realize large-scale national strategic goals abroad. As policy instruments of the central government, central SOEs may be obligated to obtain home institutional legitimacy by leapfrogging to foreign strategic markets while utilizing their institutional supports to replace experiential learning. By contrast, as commercial vehicles of local governments, local SOEs must balance the risks and benefits of foreign market entry by gradually accumulating international management expertise beyond their immediate vicinities to eventually explore more distant foreign markets. Therefore we propose:

> **Proposition 5:** Relative to central SOEs, local SOEs are more likely to follow a gradual internationalization path when conducting outward FDI.

Beyond comparing the policy-driven versus commercially motivated behavior of central and local SOEs, we identify differences in the regulatory expectations of central and local governments which influence how they pursue international diversification. While central SOEs are encouraged to invest globally, they are subject to more restrictive investment approval procedures and closer scrutiny of their diversification plans due to central governments' concerted efforts to fulfill national welfare goals. Central SOEs in many emerging economies including India, Vietnam, and China are required to focus on their core businesses which render them incapable of freely diverting resources into new business lines. While India recently recognized the importance of removing bureaucratic hurdles by establishing the Maharatna scheme

in 2009 to allow a selective group of central SOEs to invest up to 15% of their net worth in foreign projects of their choice, other emerging economies such as China continue to follow a more stringent policy. In 2006, China initially established a similar 10% cap for central SOEs on foreign investments made beyond their core businesses. However, in 2012 the government issued a new set of regulations prohibiting any new foreign investments by central SOEs in non-core business areas unless they receive special authorization. Under such regulatory pressure from home country governments not to deviate from authorized mandates, most central SOEs are largely constrained from independently diversifying their businesses in their overseas operations.

Compared with central SOEs which abide by strict government guidelines to maintain their institutional legitimacy, local SOEs follow more relaxed procedures to invest according to their business priorities. Evidence also supports the view that business diversification by local SOEs is spurred by local government development goals aimed at increasing production output and employment (Zhang & Li, 2006). Furthermore, local SOEs exhibit stronger market orientation and managerial autonomy which stimulates them to be more alert to market trends in foreign consumer demand and deploy diversification strategies to gain competitive advantage abroad. An illustrative example of an internationalizing local SOE undertaking this approach is Saigontourist, a tourism company owned by Vietnam's Ho Chi Minh City government which expanded into the health-care and rubber industries in Cambodia and Laos. In 2006, it joined a consortium of local SOEs including Saigon Construction Corporation and Saigon Real Estate Group to build a new hospital in Cambodia. As of 2011, Saigontourist invested over US$27 million in the development of this hospital and became a shareholder of a 5000 hectare rubber plantation in Laos. In China, Liugong Machinery Company, a construction machinery firm owned by the Guangxi provincial government, also established a manufacturing plant in India and recently acquired HSW, a company in Poland. Since initiating its production and sales in overseas markets, its senior management has actively broadened existing global business lines by focusing on customer's needs, in particular by adapting their product lines to meet requirements in Brazil and Thailand where environmental conditions necessitate adjustments. Lastly, the very process of economic liberalization in local domestic markets leads to rising competition which magnifies pressure on local SOEs to improve the diversity and quality of their products.

Deriving their legitimacy from central government regulations, central SOEs are obligated to focus on their core businesses and restrict their overseas business diversification. Conversely, local SOEs may achieve greater home institutional legitimacy by actively responding to varying market conditions in their foreign operations which present commercial opportunities outside their existing lines of businesses. Therefore we propose:

Proposition 6: Relative to central SOEs, local SOEs are more likely to engage in business diversification when conducting FDI.

Institutional Legitimacy in Host Countries

A volume of studies have long acknowledged that multinational corporations (MNC) entering foreign markets face costs to entry due to their lack of external legitimacy (Kostova & Zaheer, 1999; Lu & Xu, 2006; Zaheer, 1995). Such lack of legitimacy is commonly associated with incompatibility between home and host country institutional values and practices in the regulatory, cognitive, and cultural domains. It may also be attributed to perceptions by host countries of possible conflicts of interests between the home and host countries (Henisz & Zelner, 2005; Lipsey, 2004). Due to such liability of legitimacy, MNCs dedicate significant resources to cultivate a positive corporate image in local markets and employ diverse strategies such as encouraging local cultural adaptation by subsidiary units or providing financial support for local social programs. In relation to SOEs aspiring to venture overseas, their liability of legitimacy is compounded by virtue of their political affiliation to home country governments which may trigger host country concerns about SOEs' motivations for host market penetration (Globerman & Shapiro, 2009; He & Lyles, 2008). However, it has also been recognized that state ownership should be treated as a "multidimensional phenomenon" (Cui & Jiang, 2012: 281) and that SOEs with different types of government affiliation may not be subject to the same institutional pressures.

Extending this view, we propose that different levels of government affiliation matter significantly in shaping the nature and degree in which host country institutional pressures fall on SOEs. Following the distinction between goal-level and means-level conflicts of institutional demands (Pache & Santos, 2010), we argue that the potential conflicts of interest between central SOEs (internal institution) and host governments (external institution) arising from central SOEs' lack of autonomy, monopoly characteristics, and lower market orientation are likely to manifest at a *goal level* which renders such conflicts more difficult to resolve compared with disputes between local SOEs and host governments. As policy instruments of home governments, central SOEs may exercise non-commercial strategies with political motives that advance home country goals at the direct expense of host country national interests. However, local SOEs with more credible commercial objectives and higher managerial autonomy are less likely to harm such interests. This does not imply their negotiations with host governments are free of disputes or contention, but rather their disagreements are more likely to manifest at a *means level* where bargaining remains possible. This crucial distinction between goal versus means level conflict has been analyzed in the context of organizational responses to competing institutional pressures, where organizations are more inclined to exercise harder measures such as contestation or avoidance rather than compromise under circumstances of fundamental goal misalignment when bargaining options are slim (Pache & Santos, 2010). Furthermore, resource dependence has been found to influence firm strategic responses. A firm that is highly dependent on an institution for important resources is more likely to conform to rather than deviate from the institution's expectations and priorities (Oliver, 1991). In relation to central SOEs, their higher dependence on home

institutional resources reinforces their inherited policy mandate and makes them less willing to acquiesce to host country demands despite their weakened negotiating power. This view is consistent with observations made by Greenwood, Raynard, Kodeih, Micelotta, and Lounsbury (2011: 319) that "an organization's position within a field shapes the form and intensity of complexity that it will experience such that 'central' highly embedded organizations may be more exposed to the tension that multiple logics engender as compared to less embedded 'peripheral' organizations".

The willingness and ability for firms to devise solutions to address external legitimacy challenges has important implications for their FDI strategies. Prior studies have found that firms' selection of entry modes, reflected in their subsidiary ownership structure, can be used to establish institutional legitimacy in host environments (Cui & Jiang, 2012; Yiu & Makino, 2002). New foreign market entrants may opt for a highly integrated wholly owned ownership structure to safeguard their control or a more loosely integrated joint ownership structure to minimize risk and benefit from their local partner's ability to navigate challenges in the informal and formal regulatory, normative, and cultural environment. The decision to engage in a joint venture also offers an array of advantages to shore up their organizational legitimacy. In addition to drawing from their partner's expertise to mitigate host country barriers, new market entrants may benefit from their partner's clean reputation to establish trust with other local stakeholders thereby alleviating host constituents' unfavorable perceptions (Cui & Jiang, 2012; Yiu & Makino, 2002). A wholly owned subsidiary is made when firms encounter high transaction costs and difficulty in negotiating with or monitoring their local partners (Brouthers, 2002). Therefore firms seeking to avoid possible disputes or opportunism by a foreign partner will select this form of entry mode to maximize their control.

The incongruence between the interests of central SOEs and host governments may attenuate their ability to cultivate successful joint venture operations. Such perceived disadvantage can encourage central SOEs to use more exacting measures to secure their global strategic interests resulting in a preference for less compromising and more competitive entry modes such as wholly owned operations. Central SOEs may also be keen to select wholly owned entry approach since it optimizes their control and ability to fulfill home country obligations arising from their high resource dependence.

Strong preferences by central SOEs for comprehensive ownership control in FDI was recently manifested in a failed attempt by Singapore's state owned DBS Group to win regulatory approval from Indonesia's central bank to gain a 99% stake in PT Bank Danamon, which ranked sixth in assets among Indonesian banks. In 2013, DBS Group was compelled to withdraw from its year-long bid which would have been the largest acquisition in Indonesia's history due to a combination of de facto protectionist measures by both countries. Several months into negotiations, the deal was delayed by the Indonesian central bank's decision to establish new bank ownership rules which restricted foreign investors' initial shareholding to 40% in Indonesian banks. The Indonesian central bank gave DBS Group the

option to purchase a minority stake and increase its shareholding in exchange for providing greater market access to Indonesian banks for expanding their foothold in Singapore. Despite this compromise offer, inaction by Singapore's Monetary Authority to reciprocate prompted DBS Group to withdraw its bid, contributing to the deal's collapse. Meanwhile Indonesian banks such as Bank Negara Indonesia are now exploring alternative foreign investment strategies such as establishing a branch in Myanmar to support the overseas expansion of other Indonesian SOEs into this rapidly developing country.

Undoubtedly, local SOEs also face considerable challenges in foreign markets, but unlike central SOEs which often stir up significant host country resistance in their overseas investments, we argue that local SOEs are better positioned to negotiate for host country local legitimacy. Since they are less likely to encounter goal level conflicts, a wider set of options to offset host government concerns are available to them. The more neutral perception of local SOEs by foreign host constituents may permit them to find willing joint venture or trading partners open to foreign investment in host environments. Employing collaborative entry approaches can permit local SOEs to gradually expand their network of formal and informal engagements with foreign stakeholders to modify host perceptions in their favor. Such strategies are not new and have been previously deployed by latecomer Japanese firms such as Toyota when overcoming high entry barriers to the US market in the 1980s (Chung, Mitchell, & Yeung, 2003).

In recent years, collaborative entry approaches have been adopted by various local SOEs from India, Indonesia, and China. A characteristic example is Beidahuang Nongken Group, a local agricultural company owned by China's Heilongjiang provincial government which signed a joint venture agreement with Argentina's Cresud SA and the local government of Rio Negro to lease and develop vast tracts of farmland in Patagonia to produce agricultural products for export to China. The 20-year joint venture collaboration which facilitated the circumvention of strict regulations banning large foreign land acquisitions also included plans for the Chinese partner to contribute to local economic development by expanding Rio Negro's port and constructing irrigation facilities. Indonesian local SOEs have also been actively pursuing collaborative investments abroad. In addition to PT Riau Airlines, PT Pembangunan Jaya Ancol, a local tourism and property management company controlled by the Jakarta municipal government was recently invited to establish a joint venture theme park by the Malaysian government. Beyond Malaysia, the firm has also been keen to establish a commercial presence in Cambodia, Thailand, and Vietnam. Over the past decade, two local Indian SOEs controlled by the Gujarat state government also established high-profile joint venture projects overseas. In 2006, the Gujarat State Fertilizers and Chemicals Ltd. initiated a joint venture project with two Tunisian SOEs to build a chemical plant to produce ingredients for fertilizer production which would be exported to India. This facility became operational in July 2013 and currently employs over 500 people. Gujarat State Petroleum Corporation, the only provincial company in India engaged in oil exploration and production, also has multiple joint ventures with firms in several countries including Egypt, Yemen, and Australia.

Given prominent differences in their willingness and ability to negotiate for host country legitimacy between central and local SOEs, we propose:

> **Proposition 7:** Relative to central SOEs, local SOEs are more likely to choose a joint ownership structure than a sole ownership structure when conducting FDI.

In addition to entry mode, the method of establishing a foreign subsidiary also matters for firms' ability to cultivate institutional legitimacy in the host country. Firms may select to conduct a greenfield or mergers and acquisitions (M&A) investment which can influence host country stakeholder perceptions of foreign entrant's investment motivations. Greenfield projects typically involve the construction of new physical facilities contributing to tangible job creation and host country productive output while M&A investments require purchasing of existing assets and resources without necessarily creating new value. M&A investments by foreign entrants are generally perceived less favorably by host constituents compared with greenfield investments which offer more benefits (Globerman & Shapiro, 2009). Moreover, M&A approaches are viewed as more competitive and less collaborative since it facilitates the takeover of valuable domestic assets by foreign entrants (Zhang et al., 2011). Therefore greenfield projects rather than M&A investments may imprint more positive impressions on host country stakeholders to facilitate deeper operational ties.

Since goal-level conflicts between central SOEs and host country stakeholders compromise central SOEs' willingness and ability to successfully negotiate for host legitimacy, the diminished likelihood of resolution for such conflict may encourage central SOEs to follow more competitive or evasive entry strategies. Local SOEs on the other hand have more alternatives to address means-level conflicts with host country stakeholders. In contrast to central SOEs which may prefer M&A or wholly owned investment strategies, local SOEs can employ a greenfield approach to create mutual benefits and secure host country legitimacy. For example, the joint venture operations by Beidahuang Nongken Group, PT Pembangunan Jaya Ancol, Gujarat State Fertilizers and Chemicals Ltd, and Gujarat State Petroleum Corporation were all established through greenfield investments which rewarded both host and home country stakeholders.

For central SOEs, their interest in securing and optimizing their monopoly power also places them in direct competition against well-established multinationals such as BHP Billiton and General Electric which dominate highly competitive global industries. Challenged to outpace their stronger rivals, central SOEs with latecomer disadvantages may also prefer M&A to rapidly accelerate their international growth and upgrade their capabilities directly through acquisition of assets and knowledge rather than rely on slower organic growth. Central SOEs often adopt this aggressive M&A approach despite its tendency to create goal level conflicts with host country governments. A widely reported and controversial case which illustrates such contentious behavior by a central SOE is the failed attempt by Alumninum Corporation of China (Chinalco) to increase its minority stake in Rio Tinto. In 2009, both parties agreed for Chinalco to make an additional

investment of $20 billion in Rio Tinto which would have doubled Chinalco's ownership stake, but after Rio Tinto withdrew from the deal partly due to heightened opposition from the Australian government, the Chinese media immediately made declarations accusing Australia of open protectionism. An unusual but noteworthy statement was issued by a Chinese Ministry of Commerce analyst that Chinalco was no longer interested in making additional compromises in such deals. Unable to respond to foreign host pressures while prioritizing home country interests, Chinalco was compelled to adopt a confrontational response rather than negotiate for host country legitimacy. Such differing host country legitimacy and global competition challenges faced by central and local SOEs may lead them to exhibit varying preferences for FDI establishment methods. Summarizing the aforementioned discussion, we propose:

> **Proposition 8:** Relative to central SOEs, local SOEs are more likely to pursue greenfield investment rather than M&A when conducting FDI.

We illustrate our theory and propositions development in a trickle-down model (see Fig. 2). As shown in Fig. 2, central and local SOEs differ along four characteristic dimensions (Propositions 1–4) which are derived from reform processes underpinning evolution in the macro-institutional systems of emerging economies (see Fig. 1). We posit that the interaction of these organizational differences with particular home and host institutional pressures further give rise to differentiation in local and central SOEs' FDI strategies (Propositions 5–8). Overall, the trickle-down model illustrates how macro-institutional processes serve as drivers of variation in SOEs' FDI activities.

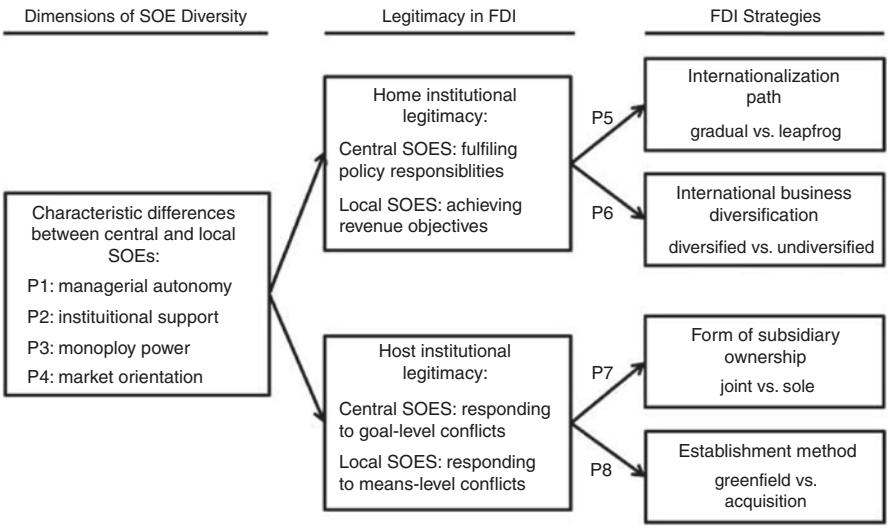

Fig. 2 The trickle-down effects of institutional change on SOE diversity and FDI strategies

Discussion

Main Theoretical Contributions

Prior studies on the foreign venturing of SOEs have identified how incompatibilities between home country strategic interests and host country resistance can generate contravening circumstances affecting the cross-border activities of SOEs (Gordon & Tash, 2009; Kowalski et al., 2013; Shapiro & Globerman, 2012). While there has been no shortage of studies highlighting such important considerations, the cascading effect of institutional reforms in catalyzing diversity among SOEs and its profound consequences for how SOEs balance competing institutional demands in their cross-border FDI remain largely overlooked. To deepen this vein of investigation, we unravel the formative institutional mechanisms by which central and local SOEs evolve distinct salient characteristics that motivate them to adopt different overseas expansion strategies.

With this paper, we both contribute to efforts to understand the broader implications of institutional diversity for IB studies and respond to calls for greater cross-fertilization of ideas from the comparative capitalisms literature to IB research (Jackson & Deeg, 2008). Our theoretical framework draws from and integrates both research streams by delineating how intricate combinations of reform processes can reconfigure institutional arrangements of economic coordination in emerging economies which affect resource allocation and capabilities formation for SOEs investing abroad. Rather than adhering to a static perspective on SOEs, we advance a configurational approach to examine their evolution into organizational actors with varying agendas. Embracing this approach enriches and elaborates a bigger picture understanding of how governments are internally adapting their state sectors to sustain hybrid models of economic coordination capable of greater responsiveness to global integration.

More specifically, we develop a dynamic model to illustrate how varieties in state capitalism may emerge due to the transformative and cross-cutting nature of reforms in emerging economies which results in more radical measures of change and idiosyncratic patterns of development among SOEs. In particular, the mixing and coalescing of elements from central planning and market-based coordination rearrange the constellation of economic and political state actors into a hybrid institutional configuration capable of supporting both forms of economic activity. By disentangling the effects of multiple reform processes to show how they reconfigure institutional subsystems for new kinds of economic coordination, we trace the unique patterns of development of SOEs operating in these subsystems. Interestingly, the extant comparative capitalisms literature has been largely silent on how systems of economic coordination can be reshuffled to create new institutional synergies which facilitate the structuration of market-based development in emerging economies. Through the prism of diversity in capitalism, we theoretically map the effects of macro-level institutional changes to SOE firm-level attributes.

Our theoretical development shows how as the roles, resources, logics, and priorities between central and local governments are realigned to accommodate a

hybrid market economy, the functions and characteristics of SOEs under their respective jurisdiction also begin to diverge. Central SOEs are reformed into "national champions" with more concentrated monopoly features and business group characteristics to act as policy instruments of the state. Their formal mandates to support macro-level industrial growth and social welfare distances them from purely profit-maximizing practices. Whereas, local SOEs are restructured into more autonomous and market-oriented firms with greater flexibility and driven by commercial logic. Such integral differences in the formulation of their strategic priorities and resource positions not only intrinsically shape how SOEs act in domestic business environments, but also how they navigate foreign markets.

We extend existing theories on SOEs' foreign investment behavior by showing how underlying organizational differences can regulate their ability to obtain home and host country institutional legitimacy for foreign investment. Prior research has found that SOEs are highly resource dependent on home country institutions which increases pressure for their conformity to domestic demands and priorities (Cui & Jiang, 2012). SOEs intending to venture abroad are also simultaneously under magnified pressure from host country institutions to demonstrate credible investment motives (Li & Meyer, 2009; Kowalski et al., 2013). Consequently, a crucial issue faced by SOEs is whether they can balance the dual competing demands of home country and host country governments. Since central SOEs are more likely to face goal-level conflicts with host institutions which may perceive them as threats, the visceral strength of such conflicting legitimacy requirements may handicap their legitimization efforts, leading to their adoption of more evasive or competitive foreign market entry strategies. On the other hand, local SOEs may exhibit greater flexibility to pursue collaborative investment strategies due to their more credible commercial profiles. Rather than categorizing all SOEs under the same umbrella, we unveil how their restructured capabilities and exposure to varying home and host institutional pressures can propel them to deploy different strategic tactics abroad which are reflected in their foreign subsidiary establishment strategies, international diversification patterns, and geographic location preferences.

Implications for Host and Home Country Governments

Our study holds critical implications not only for key stakeholders such as host and home country government owners but also for researchers in advisory roles. First, developing greater awareness of SOE diversity among host country policymakers would enable them to draw more precise conclusions regarding the strategic motivations of foreign investing SOEs. In recent years, with the rapid growth of foreign investments by emerging economy SOEs, many host governments have imposed a spate of bureaucratic restrictions and review procedures applying to all state-owned entities which have sparked concerns about protectionism by home country governments. While host governments regularly commission reports from internal research groups and experts from academic institutions to scrutinize foreign investing SOEs in their territories, such studies have tended highlight

SOEs' potential strategic and security complications with minimal consideration for their diverse origins or potential value propositions to host constituents.

For example, Shuanghui International Holdings, a food and logistics group recently privatized by the Henan local government in China faced regulatory hurdles in its efforts to acquire Smithfield Foods, a US pork producer. An expert's testimony commissioned by the US Senate asserted the deal represented a national security threat on the basis of Shuanghui International's previous state ownership without clarifying the nature of such state ownership apart from offering a general statement asserting that the Chinese government's role is complicated and not always disclosed. Although Shuanghui International's bid was ultimately successful as it did not represent any material harm and received unwavering support from its American partner, a more detailed assessment of its background would have shed greater clarity on its commercial intentions. Government responses have significant signaling effects on the perceptions of domestic firms and stakeholders. Applying finer-grained methods to diagnose the business risks of foreign SOEs may offer better guidance to host country firms considering potential business ventures with them.

Second, home country governments should also reflect on the institutional reform implications for their SOEs' overseas activities. While a substantial segment of reforms constitute experiments in the making, emerging economy governments should not overlook the consequences of their institutional designs which directly impact the ability of SOEs to address legitimacy issues in host environments. Emerging economy policymakers should consider how the strategic features of SOEs are shaped through the reorganization of institutional elements catalyzed by reforms and how altering these elements may trigger a change in the way SOEs' actions are perceived abroad. By consolidating central SOEs into what they envision to be world class "national champions", emerging economy policymakers may inadvertently spur corresponding measures by potential host countries to issue stronger policies fortifying them against incoming FDI activities by foreign SOEs. Therefore engaging in more extensive communications to gauge host governments' reactions to their reform efforts through regular exchanges and forums sponsored by international organizations such as APEC and OECD may help emerging economy policymakers to design appropriate measures facilitating the viable expansion of their SOEs operating abroad.

Implications for Managerial Practice

The evolving strategic functions of SOEs bring consequences for their managers as well as host country business partners and competitors. Although central SOEs from emerging economies face significant host country resistance combined with domestic restrictions on business diversification, local SOEs with sufficient resources for international venturing may now exercise greater flexibility in their FDI strategies than before. By recognizing these favorable conditions, managers of local SOEs can actively prepare their firms to exploit such advantages by undertaking more extensive efforts to develop business ties with foreign firms receptive to alliances and partnerships. Local SOEs from emerging economies which have successfully cultivated such strategic alliances can leverage them to make inroads

into new host markets while minimizing legitimacy concerns. Moreover, establishing such alliances can enable local SOEs to access different managerial perspectives from their foreign partners which may revitalize their reform momentum and lead them to consider new business models and organizational practices to upgrade their existing capabilities.

Central SOEs may continue to encounter intrinsically more challenging issues stemming from their domestic policy-driven focus especially given accelerated efforts by emerging economy governments to promote their entry into foreign markets. Although their managers may prefer more evasive or competitive strategies, displaying greater openness to compromise solutions may facilitate future progress despite their initial lack of appeal. Following its unsuccessful bid for PT Bank Danamon, DBS Group's CEO admitted the substantial setback of this missed opportunity and estimated it would take more than 5 years for DBS to independently grow its operations in Indonesia. Due to such prominent priorities at stake and the potentially irreversible effect of their decisions, central SOE managers and their respective governments may need to more carefully reevaluate whether long-term benefits of concessions may outweigh shorter term sacrifices when compromise opportunities arise. Central SOE managers may also consider more targeted strategies to compensate for their institutional shortcomings by cultivating mutually beneficial collaborations with neutral third-party foreign partners to build sufficient legitimacy for establishing multi-party consortiums to jointly invest abroad. While this approach may dilute their ownership control over foreign invested subsidiaries, it may also serve to diffuse potential goal level disputes with host governments.

Finally, developing institutional awareness of complex trends in the population change of emerging economy SOEs can enable foreign firms to better anticipate their overseas behavior and incorporate these into their own schemes for effective collaboration or competition. Five years ago Shuanghui International became involved in a trading partnership with Smithfield Foods. Recognizing the strategic importance of their relationship, senior managers from Smithfield Foods repeatedly proposed mutual shareholding arrangements before an acquisition deal was negotiated. The acknowledgment by Smithfield Foods' CEO of his proactive role in negotiations to sell his company indicates that Smithfield Foods was a strategic enabler of this deal and was as mutually interested in reaching an agreement as its Chinese counterparts. Representing the largest acquisition of a US company by a Chinese firm, this breakthrough deal signifies a nascent deepening in foreign firms' discernment of new institutional realities in emerging economy countries.

Implications for Future Research

Through a systematic examination of the institutional drivers and mechanisms underpinning emerging economy SOEs' evolutionary organizational development, we offer a series of propositions that can be empirically investigated using longitudinal multilevel methods. Apart from empirical evaluation, our attempt to disaggregate the effects of institutional change processes and how

they give rise to varieties in state capitalism also creates space for important theoretical questions regarding other forms of SOE diversity and their associated effects on SOEs' overseas venturing. Organizational diversity is multifaceted in nature. While our analysis captures general reform processes that are most relevant to the renegotiation of the relationship between different levels of government, it does not explore the full range of country-specific reform dynamics that may induce organizational diversity along different dimensions. For example, the effects of partial privatization and ownership reform in China, India, and Vietnam have led to the proliferation of transitional corporate entities and public–private hybrid firms which straddle between private and public control (Boyer, 2012; Gupta, 2005).

While our study does not address the ambiguities and implications arising from the emergence of these hybrid firms, we concur with other studies (Inoue, Lazzarini, & Musacchio, 2013; Khanna, 2012; Musacchio & Lazzarini, 2014) that this is a promising area of research for future investigation. More attention can be devoted to explore the combination of resources, competitive advantages, governance structures, and routines leveraged by these hybrid organizations to operate internationally and whether they adopt more private competition based approaches to establishing organizational legitimacy in host country environments. The blurring of boundaries between government and private sectors in emerging economies creates a gray zone that will likely become a focal area where new interest groups emerge to reshape the constellation of constraints, motivations, and resources behind these state–private hybrid firms' activities. Under circumstances of shared ownership and mutual interdependence where the state retains a silent but influential strategic role, the issue of control becomes highly salient. How are such firms jointly managed by state and private shareholders? What special niches do they occupy in international markets and what mandates do they follow? Do they serve to advance institutional innovation in emerging economies? While institutional pluralism is increasingly recognized in various fields including political economy, organizational studies, and international business, its consequences remain underexplored. Future research into the relationship between state ownership and globalization can benefit from investigating how these emergent state–private hybrid firms may operate as governments' response to globalization's pressures, demands, and challenges.

Above these research horizons, future studies can also advance this line of inquiry by addressing additional factors not considered in this study. First, the temporal dimension of institutional change should be considered for its potential downstream effects. Under circumstances of radical change which has unfolded in some countries, the trickle-down effects of reform may be diminished significantly. However, this does not mean that state ownership in these countries have disappeared entirely. For instance, large-scale privatization in Russia has substantially reduced the number of SOEs but they continue to account for 11% of all firms and over 32% of total capital investment (OECD, 2008). Comparative studies aimed at measuring the effects of different reform speeds and sequencing across multiple countries can shed valuable insights into the linkages between institutional change

and organizational diversity among SOEs as well as subsequent effects on their foreign investment patterns. Furthermore, it would be worthwhile for future studies to incorporate other critical elements such as subnational institutional heterogeneity characterized by the level of institutional quality and socio-economic disparity of local regions. Various studies have pinpointed this factor as having significant impacts on firm performance and internationalization behavior (Liu, Lu, & Chizema, 2014; Ma, Tong, & Fitza, 2013; Meyer, Mudambi, & Narula, 2011; Meyer & Nguyen, 2005) which may also be a source of considerable heterogeneity among SOEs.

Lastly, while our study mainly considers how institutional changes in host country environments may shape SOEs' FDI strategies, we see a robust theoretical opportunity in investigating the effects of macro-institutional changes in host countries which may alter the institutional frameworks and conditions under which SOEs operate abroad. Recent research finds evidence that evolving political conditions in host environments can substantially curtail the ability of multinational firms to maintain their organizational legitimacy in these countries (Bucheli & Kim, 2012). Such findings merit more extensive research to evaluate the sensitivities of foreign investing SOEs to host country institutional changes and their strategic responses to mitigate associated potential risks and disadvantages.

Conclusion

Broadly speaking, the theoretical framework developed in this study makes important contributions to the international business and political economy literatures by showing how organizational diversity of emerging economy SOEs derived from macro-institutional reforms can extensively impact their overseas venturing strategies. Our study also underscores the importance of institutional change as a driving component of firm strategy in emerging economies. The ongoing reform of SOEs into modern corporations characterized by increasingly differentiated organizational modalities is imperfectly captured by current literature on state-owned multinationals which overlooks the evolving political economy systems of emerging economies as core determinants of their SOEs' global strategies. Keeping abreast of the dynamic momentum of institutional change and progressing beyond static conceptions of SOEs' identities, behaviors, and functions enables us to identify crucial inflection points in SOEs' organizational restructuring which may shape their future relationships with host governments, foreign competitors, and partner firms. Moreover, our study reveals how asymmetric institutional pressures from home and host countries may apply to different types of SOEs, mirroring their contrasting strategic agendas and capabilities. The central implication is that SOEs will encounter unique cross-border challenges and windows of opportunity borne out of such asymmetric pressures which lead them to adopt differentiated FDI strategies. By illustrating the value of diversity in state capitalism in guiding SOEs' heterogeneous overseas investment choices, we hope our paper can stimulate new research into other facets of SOE diversity and their potential impacts on SOEs' organizational responses to globalization.

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Appendix

Table A.1 Illustrative case references

Case examples	References
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(continued)

Table A.1 continued

Case examples	References
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Table A.1 continued

Case examples	References
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Overcoming Distrust: How State-Owned Enterprises Adapt their Foreign Entries to Institutional Pressures Abroad

Klaus E. Meyer, Yuan Ding, Jing Li and Hua Zhang

Introduction

The increasing international presence of multinational enterprises (MNEs) in state ownership raises new questions about if and how firms' ownership matters for their strategies (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007; Morck, Yeung, & Zhao, 2008; Wang, Hong, Kafouros, & Wright, 2012) and for their reception in host countries (Globerman & Shapiro, 2009; Sauvant, 2010). Specifically state-owned (SO) firms differ from privately owned (PO) firms with respect to, for example, objectives, resource access, and corporate strategies. In this study, we argue that as a consequence of these differences, SO and PO firms face different institutional pressures abroad, and hence adapt their international business strategies in different ways.

MNEs are exposed to institutional pressures in each country where they operate (Kostova, 1999; Xu & Shenkar, 2002), which they have to accommodate while also aligning with the MNE's global values and practices (Kostova

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& Roth, 2002; Kostova, Roth, & Dacin, 2008; Westney, 1993). In particular, MNEs have to conform to rules and belief systems in each host country to establish local legitimacy (Kostova, 1999). Such legitimacy can be enhanced by foreign investors aligning their organizational practices to local norms and regulation (Kostova & Roth, 2002), by adopting organizational structures to imitate incumbents (Chan & Makino, 2007; Yiu & Makino, 2002), or by cooperating with actors that enjoy high levels of legitimacy locally, for example, in a joint venture (Lu & Xu, 2006). Moreover, organizational forms such as low-level equity investment or greenfield operations lower an investor's public profile, and thus reduce the likelihood of being challenged for its legitimacy (Meyer & Thein, 2014).

We extend this line of theoretical work by exploring how such host country institutional pressures vary between firms in different types of ownership, and how these firms in consequence vary in their local adaptation strategies. We build on observations that SO firms face greater institutional pressures than PO firms in at least some host societies (Cui & Jiang, 2012; Globerman & Shapiro, 2009; Nyland, Forbes-Mewett, & Thomson, 2011; Sauvant, 2010). However, we propose that as an outcome of social and political processes in the host countries, this differential pressure on SO and PO firms is not homogenous across countries. Specifically, two host country conditions – one technological and one institutional – likely shape the extent of additional institutional pressures imposed on SO firms. In countries with strong technological development, concerns might arise about losing critical technologies to foreign competitors as well as to foreign governments. In countries where a strong rule of law limits the direct government interference in business, ideological inconsistencies are likely to emerge with respect to firms closely associated with governments in foreign countries. In consequence, SO MNEs are expected to work extra hard to attain local legitimacy in countries with advanced technological and institutional development. These differential institutional pressures induce SO MNEs to show more local adaptation than PO MNEs in terms of both their establishment mode (acquisition or greenfield) (Hennart & Park, 1993; Slangen & Hennart, 2007) and the level of control over the foreign operation (Brouthers, 2002, 2013; Meyer, 2001).

We apply these theoretical arguments in the context of Chinese MNEs which have become a major source of SO MNEs[1]. Many of the SO firms among the largest MNEs are of Chinese origins, and many of the largest companies on the stock exchanges of Shanghai and Shenzhen have a state entity as their main shareholder, or they are associated with business groups that in turn are controlled by a state entity (Yiu, 2011). We test our hypotheses

[1]According to the UNCTAD FDI database, Chinese outward FDI flows increased to US$84.2 billion in 2012, accounting for more than a quarter of FDI from Asian emerging economies (i.e., Asia excluding Japan). Of the Chinese outward FDI, according to the estimates by the Heritage Foundation, 96% of the dollar value from 2005 to the middle of 2012 came from SOEs (Scissors, 2012).

on a dataset of 386 overseas wholly or partially owned subsidiaries of listed Chinese MNEs in 2009. Our results illustrate how host institutional pressures shape the strategies of Chinese SO MNEs. While SO MNEs prefer acquisitions to enter foreign countries more than their PO counterparts, this propensity to use acquisition is reduced in host countries with strong technological or institutional development. In acquired units, these same host country factors induce SO MNEs to use lower equity stakes in order to enhance their legitimacy.

We contribute to the literature in international business, especially the study of interfaces between MNEs and their institutional environment, in three important ways. First, we contribute to the literature on institutional pressures pertaining to MNEs (Kostova et al., 2008; Lu & Xu, 2006; Yiu & Makino, 2002). This literature has traditionally examined institutions without distinguishing pressures faced by different types of MNEs. Our theoretical extension explains why and how certain effects of institutional pressures in host countries selectively target one type of firm ownership more than other types, and why and how in consequence these targeted firms take extra initiatives to earn local legitimacy.

Second, we contribute to the key theme of this special issue theoretical understanding of SO firms in the global economy, by explaining how SO MNEs differ in their foreign entry strategies from their PO counterparts due to their distinct interactions in the *host* society. The institutional pressures on SO MNEs are particularly strong in places that perceive SO MNEs as inconsistent with their ideologies or as threats to their national security or competitiveness, that is, in host countries with high levels of technological or institutional development. SO MNEs therefore make additional efforts in such countries to reduce the level of institutional pressure and to increase their legitimacy.

Third, we contribute to the literature on foreign entry strategy (Brouthers, 2002; Hennart, 2009) by addressing the perennial question of how establishment mode and equity mode decisions can best be modeled (Kogut & Singh, 1988; Meyer, Estrin, Bhaumik, & Peng, 2009a). Specifically, we offer a staged model in which firms first decide establishment mode, and then equity control mode.

Institutions and SO MNEs

The institutional framework of host economies is a key determinant of foreign investors' entry strategies (Brouthers, 2002; Meyer, 2001; Meyer et al., 2009a). At the subsidiary level, MNEs face institutional pressures not only from the parent organization and hence home country institutions (Meyer & Thein, 2014), but also from host country institutions (Kostova, 1999; Lu, Liu, Wright, & Filatotchev, 2014; Regnér & Edman, 2014). These home and host institutional pressures are at times conflicting (Kostova & Roth, 2002; Kostova et al., 2008; Lu & Xu, 2006; Westney, 1993), and add to the "liability of foreignness" facing foreign firms (Eden & Miller, 2004).

MNEs respond to host country institutional pressures by adapting their entry and operation strategies with the aim to enhance their legitimacy. At a basic level, they may respond to isomorphic pressures by imitating the prevalent organizational

practices and structures of other firms in the same organizational field (Meyer & Rowan, 1977), for example, in the host country (Chan & Makino, 2007; Kostova & Roth, 2002; Yiu & Makino, 2002). However, MNEs may have to do more than imitate local practices when facing fundamental challenges to their legitimacy, such as SO MNEs entering contexts dominated by PO firms. First, they may pursue "low profile strategies" that avoid the attention of critical stakeholders (Meyer & Thein, 2014). For example, they may avoid actions likely to trigger adverse reactions by local interest groups, such as hostile takeovers of local firms. The lower an entrant's profile in terms of media attention, the less likely its legitimacy will be challenged. Second, foreign investors may share ownership with local firms that enjoy high legitimacy in the host country, and thereby transfer the partner's legitimacy to their own operations (Lu & Xu, 2006). In this way, MNEs can "exchange ownership for legitimacy" (Chan & Makino, 2007: 623) as a form of symbolic or "ceremonial" adaptation (Meyer & Rowan, 1977) that helps demonstrate that the subsidiary has a local identity and merits legitimacy.

The institutional pressures on foreign investors, however, do not apply homogenously to all foreign firms; they differ, for example, with ownership types (Cui & Jiang, 2012). In particular, firms with state ownership may have less legitimacy and face greater institutional pressures in a host society than PO firms. For example, local opposition to acquisitions by foreign SO MNEs emerged in context of privatization processes involving sales of SO firms to foreign SO firms, such as East European banks acquired by Austrian state banks, utilities in Africa acquired by South African utilities, and France Telecom taking over Polish Telecom (Kulawczuk, 2007). Likewise, when Renault tried to acquire Volvo, opposition in Sweden was in part due to the fact that Renault was then controlled by the French state (Bruner & Spekman, 1998; Stevenson, 1993). As another example, Russia's state oil firm Gazprom frequently attracts political opposition in Central and Eastern Europe (Clifton & Diaz-Fuentes, 2010). More recently, investment in the mining industry by Chinese SO MNEs received considerable political resistance, especially in technologically and institutionally advanced countries such as the United States and Australia (Globerman & Shapiro, 2009).

Institutional pressures evolve as an outcome of social and political processes in the relevant organizational field (Hoffman, 1999). Specifically, foreign investors encounter historically evolved sets of cognitive, normative, and regulatory institutions in a host society (Kostova, 1999; Scott, 2001). In particular, an investor that is state owned may not "fit" a foreign institutional environment. At a cognitive level, widely shared beliefs about the nature of SO MNEs may create tensions that translate into normative or even regulatory pressures for SO MNEs to demonstrate their legitimacy. Such beliefs can arise from several perceptions as to how SO firms are different from PO firms: First, societies where the government plays a very limited direct role in business may find it difficult to appreciate how SO firms operate in other countries. Hence there may be an ideological tension between alternative variations of capitalism, specifically between free market economies and state-led market economies (Lin, 2011; Musacchio & Lazzarini, 2012; Tipton, 2009). Second, SO MNEs may be perceived not only as economic agents but also

as political agents of their home government. In some cases, SO MNEs have even been portrayed as agents of an unfriendly government aiming to extract resources from the host country, and thereby damaging its economic infrastructure and possibly even threatening its national security (Globerman & Shapiro, 2009; Nyland et al., 2011). Third, SO firms tend to have preferential access to some resources from their government, for example, in form of loans from state banks or access to services of overseas diplomatic representations (Buckley et al., 2007; Knutsen, Rygh, & Hveem, 2011; Li, Newenham-Kahindi, Shapiro, & Chen, 2013; Luo, Xue, & Han, 2010). Although this access is normally conditional on providing services to the society or to the government (Cui & Jiang, 2012; Li et al., 2013; Wang et al., 2012), it is by some considered as an unfair competitive advantage, a view promoted by some interest groups in host economies (Sauvant, 2010; Wong, 2013). Fourth, SO firms are typically viewed as less efficient than their PO counterparts, and therefore believed to generate limited spillover benefits to the host economy (Globerman & Shapiro, 2009). Finally, SO firms have a reputation for more bureaucratic organizational structures and less transparent business practices; as a result, they are seen with greater suspicion by both employees in acquired businesses abroad, and by other stakeholders in host societies (Liu & Woywode, 2013; Zhang, Zhou, & Ebbers, 2010).

These beliefs, which may or may not be supported by empirical evidence, shape reactions by local actors and hence the institutional pressures faced by SO firms. We therefore argue that these beliefs, and hence the differences of institutional pressures faced by, respectively, SO and PO firms, vary across countries. In particular, two host country conditions – one technological and one institutional – likely shape the level of additional institutional pressures faced by SO firms. In countries with strong technological development, fears might arise from losing critical technologies not only to foreign competitors but to foreign governments. In countries where a strong rule of law limits the direct government interference in business, ideological inconsistencies with SO firms are likely to arise. In these countries, institutional pressures on SO MNEs are likely more salient.

Hypothesis Development

Key decisions of a foreign entry concern whether to acquire a local firm or to establish a new subsidiary from scratch, that is, a greenfield project (Hennart & Park, 1993; Slangen & Hennart, 2007), and the level of equity control in the new operation (Anderson & Gatignon, 1986; Meyer et al., 2009a). Both decisions can be used to accommodate host country institutional pressures.

First, greenfield investors usually face fewer challenges to their legitimacy than acquirers of local firms. Acquisitions tend to have a higher profile in local media and political discourses, and they potentially involve short-term job losses, whereas greenfield investments bring more visible benefits such as new production capacities and new jobs (Globerman & Shapiro, 2009; Sauvant, 2010; Xu & Shenkar, 2002). Theoretically, the long-term effects of establishment mode on employment generation and economic growth are ambiguous because of indirect effects such as

crowding out and productivity increases (Meyer, 2004). However, political discourses tend to be driven by beliefs and interest group interventions, and therefore rarely consider such complex indirect benefits (Globerman & Shapiro, 2009).

Thus acquirers face stronger institutional pressures to demonstrate their legitimacy. These pressures originate from norms of legitimate organizational forms in the society, but may take regulatory form, notably competition law as applied to mergers and acquisitions, and national-security-related laws as applied to resources considered strategic by the host society. For instance, while mergers and acquisitions are subject to security review by the Committee on Foreign Investment in the United States, greenfield investments are exempted from such review (Sauvant, 2010). Pressures also arise from managers and employees of the target companies who are worried about their job security and attempt to influence the outcome of proposed acquisitions through, for example, lobbying regulatory authorities. Hence since more stakeholders in the host country are *directly* affected by foreign acquisitions than by greenfield investments, more institutional pressures are likely to emerge. Investors may thus aim to reduce such institutional pressures by investing in greenfield projects rather than acquiring local firms.

These institutional pressures, however, do not prevent all acquisitions because some strategic objectives, such as first mover advantages and access to resources that are embedded in local firms (Hennart & Park, 1993; Slangen & Hennart, 2007), call for an acquisition entry. In particular, foreign investors seek both resources that help local competitiveness (such as knowledge of the business environment and marketing assets) and internationally transferable assets (such as technologies) that investors aim to redeploy in their global operations (Anand & Delios, 2002; Meyer, Wright, & Pruthi, 2009b). In pursuit of such strategic objectives, entrants may use acquisitions even when facing contrarian institutional pressures. In such acquisitions, however, entrants can vary the degree of equity control as a means to alleviate legitimacy concerns in host countries (Chan & Makino, 2007; Yiu & Makino, 2002). In particular, a lower level of equity enables a low profile strategy (Meyer & Thein, 2014) and provides an important signal that an investor is working with local partners to align to institutional norms in the host economy (Cui & Jiang, 2012). Specifically, a low level of control limits the ability of the owners of the investing firm to impose their objectives onto the local operations, and thus alleviates suspicions of local stakeholders. Moreover, shared ownership enables investors to leverage the legitimacy of the local co-owner (Lu & Xu, 2006), and facilitates local regulatory approval where that is required (Sauvant, 2010). Indeed, regulatory authorities seldom intervene in acquisition deals where the acquirer takes a non-controlling interest in the target.[2]

To sum up, entry modes involve two decisions that can be used to accommodate host country institutional pressures. First, acquisitions are subject to more

[2]For instance, additional screening and approval by the government are needed in Canada only when foreign SO investors attempt to take controlling interests ("acquisition of control") in Canadian firms (Investment Canada Act, 2013).

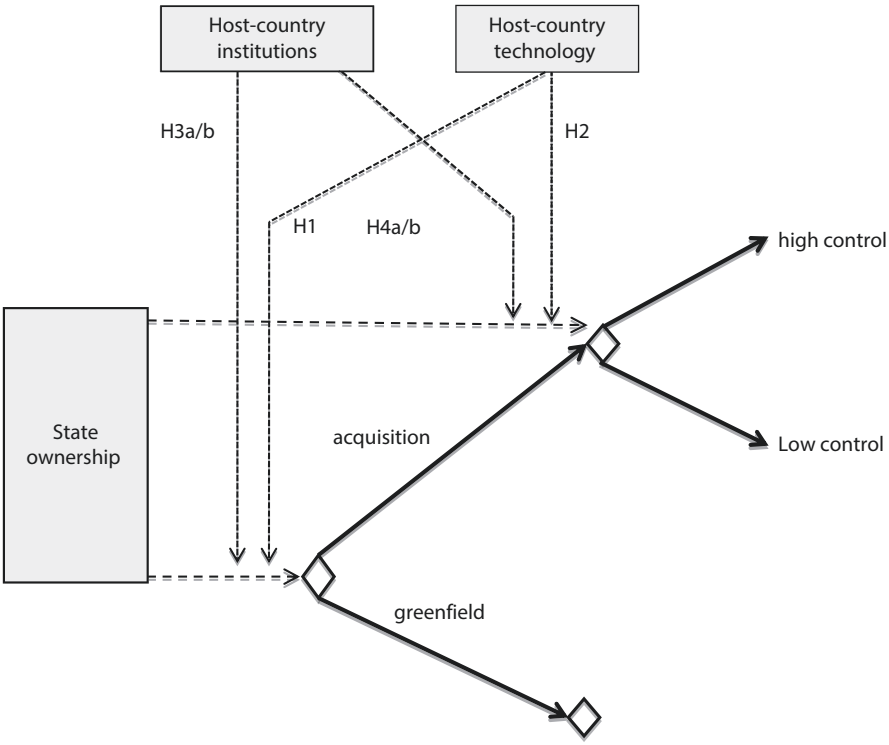

Fig. 1 Host country technology and institutions and SO MNEs' entry strategies

institutional pressures than greenfield investments. Further, in acquisitions, the control decision is subject to negotiations with the sellers of the target firm and other local stakeholders (Hennart, 2009), which is not the case in greenfield entries. Hence we analyze equity stake decisions specifically for acquired units, which lead us to an entry mode choice of two-staged decisions where MNEs first choose their establishment mode between greenfield and acquisition and then choose their equity control level in acquired units (Fig. 1). Our hypotheses explore aspects of the host country that are likely to trigger differential institutional pressures on SO MNEs, and the impact of such pressures on their entry strategy.

Host Country Technological Environment

Host societies may have major concerns about foreign takeovers when an acquirer could use acquired technology in ways that harm the competitiveness of the host economy (Globerman & Shapiro, 2009). Such concerns can arise from the relocation of high value adding activities out of the country, from sharing of technology embedded in a local cluster with wider groups of competitors abroad, or from transfer of technology of military relevance to countries perceived to be hostile.

Some of the technology that the foreign firm gains access to may not be owned by the acquired firm (and hence paid for in the acquisition) but shared knowledge in the local business community, perhaps even including the outcome of government sponsored research projects. Host countries or business communities whose international competitiveness relies to a large degree on their technological prowess are thus likely to be concerned about such "technology leakage" and develop institutional pressures to prevent acquisitions of technology.

Technology leakage concerns are likely to arise in particular when the acquiring firm is an SO MNE, for several reasons (Sauvant, 2010). First, emerging market MNEs enter technology-rich host countries often with the explicit goal of securing technological resources (Chen, Li, & Shapiro, 2012; Cui, Meyer, & Hu, 2013; Deng, 2009, Li, Li, & Shapiro, 2012; Rui & Yip, 2008). In case of SO MNEs, such acquired technologies may be diffused fast in the home country, in part in form of deliberate sharing with other state agencies or firms. For example, in China, the acquisition of world-class technologies and brands overseas is not only a corporate strategy but an explicit goal of government policy (Xinhua, 2011). SO MNEs might thus pass the acquired technology to other SO firms, including those in the military sector, to fulfill political objectives such as development of national economy and defense. Second, stakeholders in host countries often find it more difficult to monitor technology transfer activities of SO MNEs than those of PO firms because the organizational structures and processes of SO firms are generally less transparent than in private firms, which in itself can be a source of suspicions (Liu & Woywode, 2013).

The reverse transfer and dispersion of technology by foreign SO MNEs is therefore by some local stakeholders perceived to be a threat to their competitiveness, and perhaps even to their security. Such perceived consequences of technology leakage have in some countries led to new regulations that require special screening or approval of acquisitions by SO MNEs (Sauvant, 2010), which create additional regulatory pressures that SO MNEs have to manage.

We therefore expect that in countries with abundant technological resources, SO MNEs are more likely than their PO counterparts to encounter adverse host country institutional pressures when pursuing acquisitions. Consequently, we predict that SO MNEs are less inclined to use acquisitions as an establishment mode when entering technology-rich host countries.

> **Hypothesis 1:** The higher the host country's endowment with technology, the less likely that SO MNEs will choose an acquisition entry relative to PO MNEs.

Once an entrant decided to acquire a local firm, for example, because that is the only way to access some sought resources, they can still address local legitimacy concerns by the way they structure the acquisition deal. Most important, they can choose a partial acquisition over a full acquisition as a means to benefit from the local co-owner's legitimacy (Lu & Xu, 2006) and to reassure local stakeholders of their mutually beneficial objectives (Cui & Jiang, 2012). Former owners that remain involved in the company stand for both business continuity and the

protection of legitimate interests of the host society, such as the retention of technological competences, and thus lend legitimacy to the acquirer in the eyes of local stakeholders.

Where local stakeholders are concerned about technology leakage as a consequence of SO MNEs' strategic asset seeking, institutional pressures are likely to target specifically acquisitions by SO MNEs. As argued earlier, we expect this to be the case in particular in technology-rich countries. We therefore expect SOMNEs to design their acquisition deals so as to keep a low profile, avoid conflicts with local stakeholders, and leverage the legitimacy of a local co-owner. In consequence, SO MNEs would be more likely than PO MNEs to pursue lower equity control levels in acquisitions in high-technology countries.

Hypothesis 2: In acquired units, the higher the host country's endowment with technology, the lower the equity control level SO MNEs will choose relative to PO MNEs.

Host Country Institutional Environment

The institutional profile of a host country in terms of regulatory, normative, and cognitive institutions shapes the pressures that foreign investors face (Kostova, 1999; Yiu & Makino, 2002). Pressures that are directed specifically against SO MNEs are likely to be strong in countries where the dominant ideology promotes a free market economy. Such countries organize their economies around markets and open competition between private firms. The efficiency of markets is secured by the rule of law, in particular private property rights, transparency in business relationships, and the protection of private shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 2008). In such a context, governments are normally not directly involved in business, and SO firms are rare. Therefore the legitimacy of SO MNEs is likely to be challenged because they appear to be inconsistent with the leading ideology, and a potential threat to the economic system, as argued previously. This belief creates normative pressures that can lead to additional regulatory requirements for acquisitions by foreign SO MNEs, such as a formal approval by committee on foreign investment (Sauvant, 2010). Such requirements strengthen the positions of local stakeholders and provide means by which they can prevent the implementation of an M&A deal (Zhang et al., 2010).

An important channel through which institutional norms can affect the outcomes of acquisition negotiations is the legal protection of minority shareholders. A strong shareholder protection makes it more complex for acquirers to obtain equity stakes because of requirements for transparency of the acquisition process, and the need for minority shareholders to approve proposed acquisition deals (La Porta et al., 2008). Hence an acquirer has to earn legitimacy with minority shareholders as well.

These arguments suggest that institutional pressures opposed to acquisitions by SO MNEs are particularly strong in countries with strong legal development, with shareholder protection being a particular important aspect of the rule of law. In such countries, local stakeholders are both more motivated and more equipped with

legal means to deter acquisitions by SO MNEs. Therefore we expect that in these contexts SO MNEs are more inclined to use greenfield investments that grant them more legitimacy.

Hypothesis 3a: The stronger the host country's rule of law, the less likely that SO MNEs will choose an acquisition entry relative to PO MNEs.

Hypothesis 3b: The stronger the host country's shareholder protection, the less likely that SO MNEs will choose an acquisition entry relative to PO MNEs.

Host country institutional pressures specifically affect the ownership stake that foreign investors take (Yiu & Makino, 2002). In countries with strong rule of law, local stakeholders are more motivated to exert pressure on SO MNEs acquiring a local company because of the perceived discrepancy between the principles of a free market economy and the notion of state ownership. If SO MNEs wish to acquire a firm in such a country, they face strong pressures to use other means to signal their commitment to the rules of a market economy. An important and highly visible means to appease such pressures when acquiring a local operation is to retain a local partner as shareholder (Chan & Makino, 2007), in particular when that partner enjoys strong local legitimacy (Lu & Xu, 2006). Such partial acquisitions also tend to have a lower public profile, and are hence less likely to attract public debates and challenges to the legitimacy of the acquirer. Thus to deal with strong institutional pressures in countries with strong rule of law, SO MNEs are more likely than PO MNEs to reduce their equity stake when acquiring a local firm.

This effect is likely to be particularly evident where existing minority shareholders can use their power provided by their legal protection to ensure that the acquisition is aligned to institutions of the host society. For example, stock market regulation may require investors to go public with a formal bid for all outstanding shares when increasing their equity stake beyond certain threshold levels.[3] Such shareholder protection rules make it more difficult to acquire full control because a public battle for control over a firm may open for debates over the legitimacy of the acquirer.

Hence acquirers have strong incentives to proactively demonstrate their local legitimacy in contexts with strong rule of law, especially where shareholder protection is strong. Since SO MNEs are, as argued earlier, under stronger pressures than PO MNEs, we predict SO MNEs to be more inclined to take lower equity control:

Hypothesis 4a: In acquired units, the stronger the host country's rule of law, the lower the equity control level SO MNEs will choose relative to PO MNEs.

Hypothesis 4b: In acquired units, the stronger the host country's shareholder protection, the lower the equity control level SO MNEs will choose relative to PO MNEs.

[3]In the Euronext market, a shareholder of a listed company wanting to increase its equity stake beyond 30% must make a public bid for all outstanding shares, while Hong Kong Stock Exchange requires controlling shareholders to make a public bid for all outstanding shares if the floating shares go below 25% of total issued shares.

Methods

Data and Sample

To analyze our research questions, we constructed a data set of foreign subsidiaries of listed Chinese MNEs with and without state ownership. Our unit of analysis is overseas subsidiaries, which include wholly and partially owned subsidiaries of listed Chinese firms.[4] We constructed our data set from all Chinese firms listed in the Shanghai and Shenzhen Stock Exchanges in 2009. The development of the Chinese stock market since the early 1990s is closely connected with China's economic reform, in particular, the reform of SO enterprises (Sun & Tong, 2003). A major initial political objective of establishing the stock markets was to transform SO firms into modern corporations and to improve their performance. As a result, most of the largest Chinese SO firms, such as Sinopec, China National Petroleum, China Mobile, and Baosteel are listed on either stock market. This provides legitimacy for the use of listed firms to study SO firms' internationalization activities.

The identification of SO enterprises in China is complicated by the complex patterns of ownership change over the past two decades (Yiu, 2011; Zou & Adams, 2008). For our purposes the critical aspect is whether a state entity or an organization indirectly controlled by a state entity has a controlling influence over the firm. Therefore following earlier studies (Ding, Zhang, & Zhang, 2008; Jones & Mygind, 1999), we used the principle of the largest shareholder to define a firm as SO if the single largest shareholder is a government department or another SO firm,[5] and as PO if it is an individual or a private company. This definition is based on the observation that, at least in the Chinese context, government entities have a controlling influence even as minority shareholders as long as no other shareholder holds a larger stake. As of the end of 2009, among a total of 1686 Chinese A-share listed companies, 914 companies were SO by this definition.

For the 1686 listed companies, we then hand-collected from their 2009 annual reports the information on their outward investment activities. Chinese listed firms are required to disclose information on their subsidiaries, domestic as well as overseas, which includes location and the listed company's voting rights and cash flow rights in the subsidiary. We traced back in the annual reports year by year, in order to find the year of establishment and data associated with that point in time. Based on this information, we constructed a list of 1154 entities invested by

[4]Following international accounting standards, these are reported as subsidiaries (IAS 27, §13), joint control (IAS31, §7), and significant influence (IAS28, §§6–7). "Significant influence" is associated with ownership levels of 20% or more and thus still meets the definition of FDI commonly used in the IB literature.

[5]Since 2007, China Security Regulatory Commission have required all the listed companies to disclosure in their annual reports the controlling chain and the identity of the ultimate controller of the listed entities, which makes our distinction of SO vs PO quite reliable.

listed firms. However, subsidiaries in Hong Kong, Macao and the tax havens of British Virgin Islands and the Cayman Islands serve primarily as holding organizations or as financing instruments for operations in third countries, or in fact in China itself (Ding, Nowak, & Zhang, 2010; Hong & Sun, 2006), and hence fall outside the scope of our research. We kept investments in Panama and Liberia in our sample because they are in the shipping business and are not for tax purposes. Moreover, we have taken out observations in the sectors of energy, telecommunication services, and utilities because in those sectors, almost all overseas subsidiaries are controlled by an SO MNE, and hence a meaningful comparison between SO and PO MNEs is not possible.[6] After exclusions, we had 569 observations of overseas subsidiaries of Chinese SO and PO listed companies. Due to missing values on host country variables, our final sample for regression analysis ranges from 298 to 386 observations. In Table 1 we provide the list of host countries and the number of investments in our sample.

Variables and Measurements

Dependent Variables

We traced each subsidiary back in the annual reports to the year of its establishment, in order to determine whether it was established through acquisition or greenfield. Based on this information, we constructed a dummy variable: *acquisition* is one if the subsidiary is acquired and zero otherwise.

We measured an MNE's *level of control* in a subsidiary using its cash flow rights in the subsidiary. As a robustness check, we ran the same tests using voting rights, which may vary because pyramid ownership structures are quite common in China (Yiu, 2011).[7] The difference between these two measures is small, as the correlation between the two variables is 0.97, and the results were substantially identical. To save space, we report the results based on the cash flow rights only.

Explanatory Variables

Our main explanatory variable is *state* ownership, which we measured using the ultimate controlling shareholder approach discussed earlier. Hence we defined a dummy *state* that equals to one if the firm's ultimate controlling shareholder is a state entity or owned by a state entity, and to zero if it is an individual or a private company. We dropped a few companies that have other types of ultimate ownership, such as foreign and collective. Note that in China collectively owned companies are typically "township and village enterprises", which are controlled by

[6]We thank the action editor for this suggestion.

[7]For example, when a listed parent company holds 80% ownership in a son company and this son company in turn holds 80% ownership in an overseas subsidiary, the parent firm's voting right in the overseas subsidiary is 80% and cash flow right is 64%.

Table 1 List of host countries and the number of investments in our sample

Host country	Acquisition	Greenfield	Total
Argentina	0	1	1
Australia	5	14	19
Bangladesh	0	2	2
Belgium	3	2	5
Brazil	1	4	5
Canada	5	6	11
Colombia	0	1	1
Cyprus	0	1	1
Czech Republic	0	2	2
Denmark	1	1	2
Egypt	0	1	1
Ethiopia	0	1	1
Finland	0	2	2
France	1	3	4
Germany	4	15	19
Ghana	0	1	1
India	0	10	10
Indonesia	1	5	6
Iran	0	1	1
Italy	3	6	9
Japan	8	12	20
Jordan	0	3	3
Korea	0	9	9
Liberia	1	24	25
Luxembourg	1	3	4
Malaysia	3	6	9
Mexico	0	2	2
Mongolia	0	4	4
Myanmar	0	1	1
The Netherlands	9	11	20
Nigeria	0	1	1
Pakistan	0	1	1
Panama	4	0	4
Philippines	1	5	6
Poland	1	1	2
Qatar	1	1	2

(*continued*)

Table 1 (continued)

Host country	Acquisition	Greenfield	Total
Romania	1	0	1
Russia	2	7	9
Singapore	7	23	30
Slovakia	0	1	1
South Africa	2	5	7
Spain	0	3	3
Sri Lanka	2	0	2
Sudan	0	1	1
Suriname	0	1	1
Switzerland	0	1	1
Taiwan	0	1	1
Tanzania	0	1	1
Thailand	4	1	5
Turkey	1	1	2
Uganda	0	1	1
Ukraine	0	1	1
The United Kingdom	2	8	10
The United States	22	56	78
Venezuela	1	1	2
Vietnam	0	13	13
Total	97	289	386

town or village governments and are different from either SO or private firms (Naughton, 1994).

Three variables capture the host country moderators. To capture a country's level of technological resources, we measured *host technology* by the log value of a country's annual number of patent applications to the US Patent and Trademark Office, divided by the country's GDP, to control for the size and economic development of the host economy (Buckley et al., 2007; Kogut & Chang, 1991). The patent data were obtained from the OECD Patent Statistics and refer to the year of the subsidiary's establishment (as does the GDP data).

Our *rule of law* variable is based on the Law and Order dimension at the year of the subsidiary's establishment in the International Country Risk Guide (ICRG) database published by Political Risk Services. This dimension is an assessment of the strength and impartiality of the legal system, as well as the popular observance of the law. The ICRG indicators are among the

most widely used measures for quality of institutional environments (e.g., Hall & Jones, 1999). *Shareholder protection* in the host country is measured by Lopez-de-Silanes, La Porta, Shleifer, and Vishny's (1998) anti-director rights index, which captures the easiness for outside investors to protect themselves against the expropriation of either the controlling shareholders or the managers. The index is formed by adding one when: "(1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10% (the sample median); or (6) shareholders have pre-emptive rights that can only be waived by a shareholder's vote" (Lopez-de-Silanes et al., 1998: 1123). The index ranges from 0 to 6 and is time invariant. As a robustness check, we also used the anti-self-dealing index by Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) and the revised anti-director rights index by Spamann (2010) in place of the anti-director rights index to find largely consistent results. Note that the concepts of *rule of law* and *shareholder protection* are nested, that is, shareholder protection concerns are a specific aspect of the rules of law. Hence they are entered one-at-a-time in the analysis, not simultaneously.

Control Variables

Our control variables capture variations at parent firm and host-country level. At parent level, we included *international experience*, which is the difference in years between the parent's first establishment of a foreign subsidiary and the focal overseas subsidiary. Moreover, we controlled for firm financial characteristics in the year before the establishment of the focal subsidiary, which include *parent size* (total *assets*) and *parent profitability* (return on assets (*ROA*)). The data were obtained from the database published by Wind Information.

At host country level, in addition to the country level variables mentioned earlier, we first included *political risk* at the year of the subsidiary's establishment based on the Government Stability dimension in the ICRG database (Asiedu, Jin, & Nandwa, 2009; Buckley et al., 2007). Government stability assesses the government's ability to carry out its declared programs as well as its ability to stay in office. The maximum score for government stability is 12. To facilitate the interpretation of the results, we used 12 minus the government stability score to obtain the measure for political risk. Thus a higher number implies a higher risk.

Finally, we included nine industry dummies based on the two-digit industry classifications by Global Industry Classification Standard to control for industry effects.

Model Specification

We have two sets of regressions to estimate:

1. Probability(acquisition) = *f* (state, host country variables, interactions, controls)
2. Level of control in acquired units = *f* (state, host country variables, interactions, controls)

We used a Logit model to estimate the probability of acquisition (vs. greenfield) being chosen as the establishment mode. To test Hypotheses 1, 3a, and 3b, we examine the interaction effects of *state* with, respectively, *host technology, rule of law*, and *shareholder protection* on the probability of acquisition. *Level of control* in acquired units has a distribution with a high number of observations at the upper limit of 100%, such that we chose a Tobit model to capture this non-linear distribution (Tobin, 1958; Wooldridge, 2002). To test Hypotheses 2, 4a, and 4b, we examine the effects of the three interactions between *state* and the host country variables on level of control in acquired units. For comparison, we also report results for the greenfield subsample.

As discussed in detail in the robustness check section, we also used the Heckman two-stage estimation techniques to address potential selection biases (i.e., unobserved factors jointly determine the choice of acquisition and the level of control in acquired units) but did not find the selection bias a concern for our study. We therefore report the results of the separate regression models.

Results

Table 2 provides descriptive statistics of our sample and illustrates some characteristics of Chinese SO and PO MNEs as well as the *t*-tests of their mean differences. It provides already some interesting contrasts between SO and PO firms regarding their FDI entry mode as well as their level of control in their foreign invested firms: SO firms tend to use more acquisitions while PO firms prefer greenfield investments. Nonetheless, we must be cautious in interpreting these univariate differences that might be driven by other differences between these two subgroups. We also notice that 60% of foreign invested firms belong to SO parents. In line with characteristics reported in earlier studies (Ding et al., 2008), the SO firms in our sample are more than two times larger by assets, while PO firms are more profitable in terms of ROA, 11.87% compared with 9.34% for SO firms. SO firms also have more international experience than PO firms.

Table 3 reports the correlation matrix for the variables. We observe that host technology and shareholder protection are correlated at 0.506, which is expected given the nested nature of the two constructs; in order to avoid the multicollinearity problem, we do not include them in the same regression analysis and instead enter them separately in different models.

We start our analysis by estimating a Logit regression of establishment mode choice. Table 4 reports the results with positive coefficients indicating a preference for acquisitions and negative coefficients for greenfield entries. Column (1)

Table 2 Descriptive statistics

Variables	Full sample		SO firm sample		Private firm sample		Difference between SO and private firms	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	*t*-statistics	*p*-value
Acquisition	0.252	0.435	0.307	0.462	0.168	0.378	−3.13***	0.002
Control level (cash flow rights, in percentage)	83.338	23.113	79.768	23.912	88.639	20.754	3.76***	0.002
State	0.600	0.491	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Host technology	0.361	0.342	0.375	0.449	0.341	0.110	−0.88	0.380
Rule of law	4.484	1.166	4.495	1.254	4.472	1.022	−0.19	0.850
Shareholder protection	3.651	1.474	3.558	1.460	3.778	1.491	1.27	0.205
International experience	4.452	5.544	6.030	6.484	2.077	2.124	−7.33***	0.000
Political risk	3.019	1.597	2.984	1.595	3.060	1.603	0.46	0.648
Parents size (RMB 100 billion)	0.095	0.173	0.128	0.210	0.045	0.067	−4.75***	0.000
Parent ROA (in percentage)	10.364	6.990	9.337	6.879	11.869	6.882	3.54***	0.000

*** $p < 0.01$.

includes only the control variables. As the host country variables are correlated with each other we first introduce them one at a time (Columns (2)–(7)) and then combine two not highly correlated moderating effects (Column (8)). The average VIF values of the variables included in Column (8) of Table 4 is 3.64, well below the threshold value of 10 for concerns of multicollinearity (Chatterjee, Hadi, & Price, 2000).

In countries with high level of *host technology* endowments, we find that acquisitions are more likely; the direct effect is positive and significant. Hence *host technology* principally may be attractive for foreign investors. To test our Hypothesis 1, we turn to the interaction effect between *host technology* and *state*, which is negative and significant in both Columns (3) and (8) ($p < 0.05$ and $p < 0.01$, respectively). In addition, the inclusion of the interaction between host technology and state in Column (3) also results in a significant increase in its explanatory power over the model in Column (2), as reflected by the significant incremental improvements in the log-likelihood ratio test ($p < 0.01$).

Due to the non-linear nature of Logit regression, however, caution is needed when we interpret the moderating effect of host technology. Following the method in Wiersema and Bowen (2009), we calculated the "true interaction effects", that is,

Table 3 Correlations

Variables	1	2	3	4	5	6	7	8	9	10
1. *Acquisition*	1.000									
2. *Control level*	−0.194*	1.000								
3. *State*	0.158*	−0.189*	1.000							
4. *Host technology*	−0.028	0.054	0.049	1.000						
5. *Rule of law*	0.104*	−0.066	0.010	0.013	1.000					
6. *Shareholder protection*	−0.060	0.003	−0.074	0.506*	0.191*	1.000				
7. *International experience*	−0.018	0.065	0.350*	0.205*	−0.405*	−0.061	1.000			
8. *Political risk*	0.095	−0.104*	−0.023	−0.041	−0.072	−0.119*	−0.153*	1.000		
9. *Parents size*	0.321*	−0.106*	0.236*	−0.007	0.026	−0.056	0.235*	0.120*	1.000	
10. *Parent ROA*	−0.035	0.100*	−0.178*	0.015	0.036	0.046	0.046	−0.025	0.058	1.000

* $p < 0.05$.

Table 4 Results of Logit models predicting the probability of acquisition entries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State	0.632**	0.534	3.731***	0.594*	0.598*	0.335	1.637*	4.674***
	(0.306)	(0.325)	(1.396)	(0.309)	(0.329)	(0.322)	(0.841)	(1.741)
Host technology		−0.262	6.240*					7.977**
		(0.601)	(3.185)					(3.893)
State × *Host technology*			−9.330**					−11.426***
			(3.726)					(4.408)
Rule of law				0.118	0.111			−0.293
				(0.127)	(0.233)			(0.298)
State × *Rule of law*					0.010			0.376
					(0.278)			(0.346)
Shareholder protection						−0.043	0.188	
						(0.095)	(0.171)	
State × *Shareholder protection*							−0.354*	
							(0.206)	
International experience	−0.066**	−0.006	0.007	−0.056*	−0.056*	−0.017	−0.010	0.005
	(0.031)	(0.043)	(0.046)	(0.033)	(0.034)	(0.042)	(0.043)	(0.045)
Political risk	0.052	0.036	0.034	0.065	0.065	0.064	0.074	0.019
	(0.081)	(0.085)	(0.089)	(0.081)	(0.082)	(0.085)	(0.085)	(0.092)
Parent size	5.844***	5.311***	5.603***	5.724***	5.713***	4.861***	4.771***	5.291***
	(1.238)	(1.328)	(1.358)	(1.233)	(1.269)	(1.315)	(1.305)	(1.358)

(*continued*)

Table 4 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Parent ROA	−0.013	−0.009	−0.006	−0.015	−0.015	−0.010	−0.012	−0.006
	(0.021)	(0.022)	(0.022)	(0.021)	(0.021)	(0.022)	(0.023)	(0.023)
Constant	−1.410***	−1.457***	−3.878***	−2.011**	−1.977	−1.232*	−2.127**	−3.118**
	(0.503)	(0.564)	(1.363)	(0.819)	(1.243)	(0.676)	(0.897)	(1.581)
Pseudo R	0.126	0.121	0.144	0.128	0.128	0.097	0.106	0.147
χ	54.643***	45.768***	53.445***	55.518***	55.520***	34.669***	37.800***	54.658***
N	386	318	318	386	386	298	298	318
Log likelihood		−166.62	−185.62	−217.61	−189.85	−179.06	−160.16	−158.29
Compared to model		(1)	(2)	(1)	(4)	(1)	(6)	(3)
Changes in likelihood (d.f.)		12	13	12	13	12	13	15
Likelihood ratio χ		0.27	7.56***	0.88	0.00	0.21	3.13*	1.21

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Nine industry dummies are included

the marginal effects of host technology on the relationship between state and the likelihood of acquisitions. We found that the values of the true interaction effect range from −0.58 to −0.43, with a mean value of −0.49, and that the *z*-statistic values range from −3.08 to −2.17, with all values of the true interaction effect significant. Hence as predicted, SO firms are less likely than PO firms to acquire local firms in countries with high levels of technologies. Thus we find strong support for Hypothesis 1, that is, SO MNEs adapt to stronger institutional pressures (compared with PO MNEs) where locals may be concerned about technology leakage.

In Columns (5) and (8) of Table 4, the critical effect is the interaction effect of *rule of law* with *state*, which is positive and not statistically significant, and hence fails to provide support for Hypothesis 3a. However, we find support for Hypothesis 3b in Column (7), which suggests that stronger influence of minority shareholders, as reflected in stronger *shareholder protection* would deter in particular SO firms from using acquisitions. While the direct effect of shareholder protection is not significant, the moderating effect with *state* is negative and significant ($p < 0.10$). In addition, the inclusion of the interaction between shareholder protection and state in Column (7) also results in a moderate increase in its explanatory power over the model in Column (6), as reflected by the marginally significant improvements in the log-likelihood ratio test ($p < 0.10$). We further calculated the true interaction effects of state and shareholder protection and found that the values range from −0.067 to −0.045, with a mean of −0.057, and that the *z*-statistics range from −1.67 to −2.84, with all values of the true interaction effects significant. Hence as expected, shareholders in existing firms may use their power under strong laws that protect their interests to inhibit acquisitions, especially when the potential acquirer is an SO MNE.

Of the control variables, state ownership has a positive and significant effect on acquisitions in most specifications, suggesting that the resource advantage that strengthens SO MNEs' ability to finance acquisitions overrides any contrarian host country institutional pressures. The parent size is consistently significant across specifications, as one would expect that companies with more resources are more able to finance foreign acquisitions. International experience is negative and significant in three models, indicating that more experienced MNEs hesitate to use acquisitions, perhaps because they are less in need of local partner helping them navigate the host economy.

Turning to the choice of the *level of control*, we report two sets of results, respectively, for the subsamples of acquired units (Table 5) and, as a robustness check, of greenfield projects (Table 6).[8] Our theoretical considerations suggest that the local context variables influence the level of control in acquired subsidiaries (though not necessarily in greenfield entries), and hence we turn to Table 5 to assess our hypotheses. With respect to host country technology, we note that the

[8]The descriptive statistics for the subsamples used in Tables 5 and 6 are available from the authors upon request.

Table 5 Results of Tobit models predicting level of control in acquired subsidiaries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State	−23.656**	−18.713	91.686	−21.803*	−35.883***	−25.131*	30.652	67.514
	(11.231)	(12.467)	(57.025)	(11.226)	(12.920)	(12.655)	(26.098)	(68.159)
Host technology		57.512	320.428**					285.650*
		(47.023)	(150.179)					(169.921)
State×Host technology			−314.284**					−254.539
			(155.356)					(173.834)
Rule of law				−4.704	11.626			1.498
				(3.721)	(7.607)			(8.526)
State×Rule of law					−20.602**			−9.260
					(8.631)			(9.652)
Shareholder protection						3.004	15.787**	
						(2.781)	(6.140)	
State×Shareholder protection							−16.102**	
							(6.895)	
International experience	−1.952*	−1.175	−1.060	−2.434**	−2.552**	−2.207*	−1.869	−1.606
	(1.128)	(1.263)	(1.206)	(1.198)	(1.160)	(1.226)	(1.170)	(1.275)

Political risk	0.902	−0.468	−0.101	0.701	1.874	−0.101	0.879	−0.029
	(2.270)	(2.438)	(2.513)	(2.265)	(2.254)	(2.488)	(2.419)	(2.532)
Parent size	73.478**	66.761**	72.509**	74.399**	83.218***	79.114**	73.205**	76.257**
	(28.733)	(30.106)	(28.833)	(28.983)	(28.318)	(31.125)	(29.402)	(29.388)
Parent ROA	0.502	0.289	−0.033	0.672	0.261	−0.162	−0.654	0.095
	(0.650)	(0.700)	(0.687)	(0.661)	(0.666)	(0.716)	(0.727)	(0.717)
Constant	−41.248	−56.193	−153.994*	−17.140	−98.050*	−52.436	−88.083*	−148.594*
	(42.341)	(48.265)	(78.993)	(46.309)	(57.070)	(48.519)	(48.705)	(79.114)
Pseudo R	0.046	0.046	0.056	0.048	0.057	0.056	0.066	0.062
χ	29.754***	26.840***	32.249***	31.374***	36.988***	32.593***	37.941***	35.328***
N	97	89	86	97	97	86	86	86
Log likelihood		−275.99	−270.31	−310.89	−308.09	−273.10	−270.42	−268.78
Compared to model		(1)	(2)	(1)	(4)	(1)	(6)	(3)
Changes in likelihood (d.f.)		14	15	14	15	14	15	17
Likelihood ratio χ		1.51	4.12**	1.62	5.61**	1.17	5.35**	3.08

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Nine industry dummies are included

Table 6 Results of Tobit models predicting level of control in greenfield subsidiaries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State	−21.052***	−24.077***	−31.699	−21.514***	−26.588***	−15.998**	−41.069**	−39.954
	(7.321)	(7.525)	(25.103)	(7.389)	(8.017)	(7.940)	(20.709)	(28.139)
Host technology		47.033	38.255					28.622
		(34.999)	(44.475)					(48.773)
State×Host technology			22.178					40.535
			(69.580)					(75.025)
Rule of law				1.556	8.821*			2.889
				(3.236)	(5.258)			(5.770)
State×Rule of law					−11.497*			−4.810
					(6.585)			(7.329)
Shareholder protection						−0.722	−4.404	
						(2.549)	(3.806)	
State×Shareholder protection							6.770	
							(5.120)	
International experience	1.649**	−0.881	−0.893	1.803**	1.497*	−1.973*	−2.033*	−0.865
	(0.746)	(1.070)	(1.071)	(0.812)	(0.833)	(1.086)	(1.080)	(1.075)

Political risk	−3.708*	−4.226**	−4.149**	−3.498	−3.445	−4.648**	−4.722**	−4.030*
	(2.082)	(2.082)	(2.093)	(2.126)	(2.119)	(2.234)	(2.216)	(2.146)
Parent size	11.228	20.628	20.935	8.929	21.642	39.229	36.308	24.794
	(40.070)	(40.046)	(40.062)	(40.331)	(41.094)	(41.290)	(41.201)	(40.741)
Parent ROA	0.320	0.442	0.435	0.313	0.404	0.576	0.482	0.466
	(0.478)	(0.536)	(0.536)	(0.477)	(0.481)	(0.597)	(0.595)	(0.538)
Constant	126.950***	118.113***	120.702***	118.775***	83.755***	141.710***	156.624***	109.299***
	(13.385)	(17.918)	(19.713)	(21.529)	(28.995)	(17.940)	(21.618)	(29.781)
Pseudo R	0.016	0.023	0.023	0.017	0.019	0.017	0.019	0.024
χ	22.178**	26.197***	26.298***	22.409**	25.498**	16.329	18.089	26.730**
N	289	232	232	289	289	212	212	232
Log likelihood		−553.14	−553.09	−661.20	−659.66	−477.78	−476.90	−552.88
Compared to model		(1)	(2)	(1)	(4)	(1)	(6)	(3)
Changes in likelihood (d.f.)		13	14	13	14	13	14	16
Likelihood ratio χ^2		3.72*	0.1	0.23	3.09*	0.08	1.76	0.43

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Nine industry dummies are included

direct effect of *host technology* is significant in the case of acquisitions: firms tend to acquire high control over acquired companies in technology rich countries in order to better internalize technological resources. We hypothesized in acquired units a negative moderating effect of host technology on the relationship between state ownership and control level. As expected, the results show a negative effect of the interaction term statistically significant at a 5% level (see Column (3) in Table 5). Further, the inclusion of the interaction term in Column (3) also results in a significant increase in its explanatory power over the model in Column (2), as suggested by the significant improvements in the log-likelihood ratio test ($p < 0.05$). Hence Hypothesis 2 receives strong support.[9]

In terms of host institutions, we note that the direct effect of *shareholder protection* is significant and positive in the case of acquisitions: when the local institutional environment strongly protects shareholder rights, firms tend to take higher equity stakes. However, this benefit accrues less to SO investors, as the interaction effects of *state* with *rule of law* and *shareholder protection* are negative and significant at a 5% level (Table 5, Columns (5) and (7)). Thus consistent with our predictions in Hypotheses 4a and 4b, in countries with strong rule of law and shareholder protection, SO MNEs are perceived as inconsistent with the dominant ideology, and thus reduce their control level to attain local legitimacy for their acquisitions. This argument carries particular weight where minority shareholders have a strong leverage on how the company is sold to a foreign investor. By limiting themselves to a lower level of equity, SO MNEs can signal that they operate consistently with the principles of a market economy. The inclusion of the interactions in Columns (5) and (7) also result in a significant increase in their explanatory power over the models in Columns (4) and (6) ($p < 0.05$), which provides additional support for Hypotheses 4a and 4b.

We further drew Figs. 2–4 to illustrate how the three host country moderators affect the level of control in acquired subsidiaries, based on the results in Columns (3), (5), and (7) of Table 5. The three figures present changes in level of control when each of the moderators changes from its low value (one standard deviation below the mean) to its high value (one standard deviation above the mean) and when all other variables are kept at the mean level.

Figure 2 shows that when host technology increases from low to high, SO firms tend to decrease their control level or cash flow rights in their acquired subsidiaries, whereas PO firms tend to increase their control level in their subsidiaries. Figure 3 shows similar patterns: SO firms tend to decrease their control level but PO firms tend to increase their control level when rule of law level improves. Figure 4 shows that when shareholder protection strengths, both SO and PO firms tend to increase

[9]Note that in Column (8) of Table 5 the interaction between host technology and state is not significant. We examined VIF values of the variables included in this column and found that host technology and rule of law have VIF values of well above 10, suggesting high correlations between the two variables, which might lead to the insignificance of the interaction term. Thus estimating the two interaction effects in separate models, as in columns 3 and 5, is appropriate.

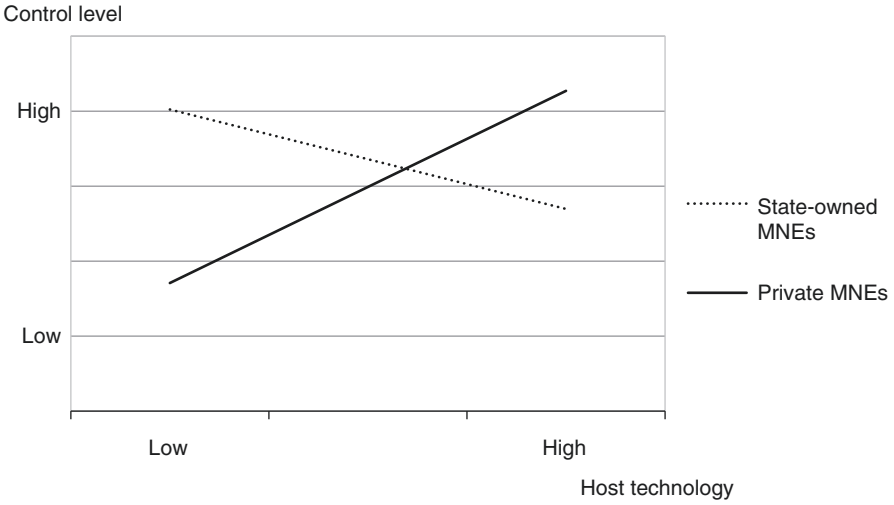

Fig. 2 Moderating effect of host country technology level on control level in acquired subsidiaries

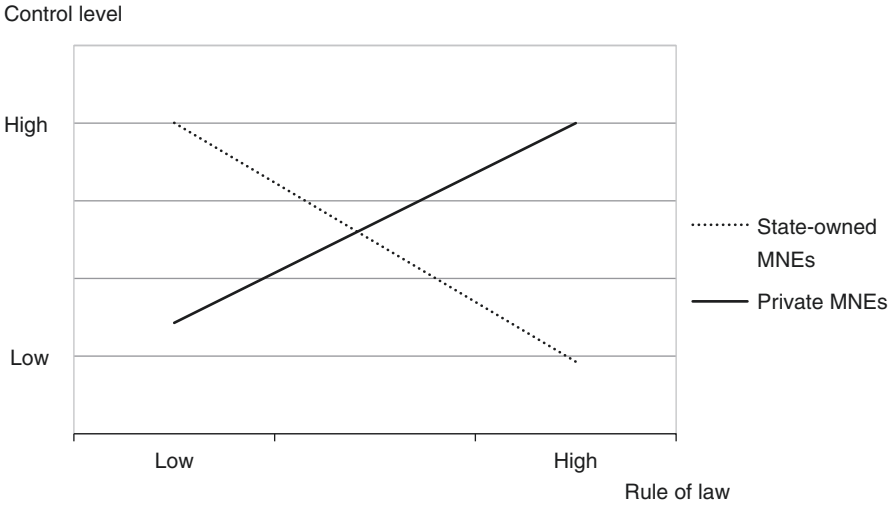

Fig. 3 Moderating effect of host country rule of law on level of control in acquired subsidiaries

their control level; however, the changes in PO firms' control level are more significant. Taken together, these figures provide additional evidence to support Hypotheses 2, 4a, and 4b that SO firms are less likely than PO firms to increase their control level in acquired subsidiaries in host countries with better technological or institutional development.

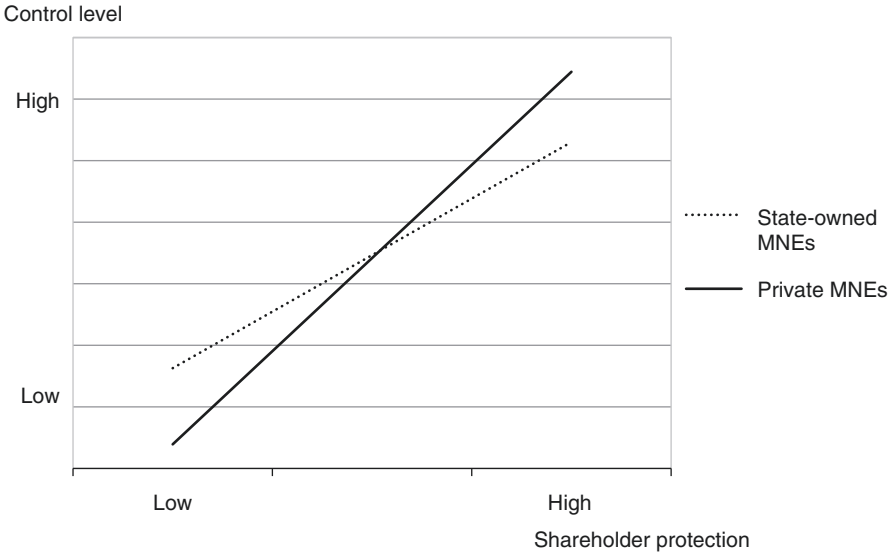

Fig. 4 Moderating effect of host country shareholder protection on control level in acquired subsidiaries

The results we obtained for acquisition entries do not, however, pertain to greenfield entries. Table 6 show that the coefficients of the interaction terms in Columns (3) and (7) are insignificant, suggesting that in countries with strong technology or protection of shareholders, SO MNEs do not differ from PO MNEs in their control level in their greenfield investments. In countries with strong rule of law, however, SO MNEs are more likely to take lower control level than PO MNEs. The coefficient of the interaction between *state* and *rule of law* is significant in Column (5) of Table 6 but both the magnitude and the significance level of this coefficient are smaller than its corresponding part in Column (5) of Table 5. We investigated this further using a Chow test to compare the two coefficients and found that the moderating effect of rule of law is significantly weaker for the greenfield entries than for the acquisition entries ($p < 0.05$). Thus consistent with our arguments, SO MNEs are less subject to host institutional pressures in countries with strong technological or institutional development when they use greenfield investments rather than acquisitions.

Turning to control variables, we note them to be in line with expectations. Large companies take higher levels of control in acquired units. In both acquired units and greenfield projects, SO MNEs take a lower equity stake compared with private firms. This might be because they are more likely to adopt a collaborative approach in their international expansion, in line with the policy advocated by the Chinese government (Cui & Jiang, 2012). Interestingly, we find that *political risk* in the host country has a negative effect on control of greenfield units, suggesting that shared control provides a means to manage exposure to political risk in newly created units.

Robustness Checks

We used the Heckman two-stage model to control for potential selection bias. In the first stage, we included the number of prior acquisitions in a specific country as an instrumental variable, along with the variables included in Model (8) of Table 4, to predict the likelihood of a focal firm's choice of acquisition in that country. In the second stage, we used the variables in Model (8) to predict the control level of a firm given that an acquisition has been chosen. We found that the number of prior acquisitions in a specific country has a statistically significant and positive effect on a firm's choice of acquisition ($p < 0.05$) while its correlation with level of control in the acquisition subsample is as low as 0.05, indicating this is a good instrumental variable. However, the inverse mills' ratio is not statistically significant ($p = 0.27$), suggesting that selection bias is not a concern for our study (results are available upon request). Therefore it is appropriate to run the two regressions separately.

We moreover included additional control variables to test for the possibility of an omitted variable bias. Specifically, we controlled for "distance" between home and host countries, a key concern in earlier entry mode research (Estrin, Baghdasaryan, & Meyer, 2009; Slangen & Hennart, 2007; Tihanyi, Griffith, & Russell, 2005, Zhao, Luo, & Suh, 2004), using two measures from Dow's distance indices (Dow & Karunaratna, 2006), namely democracy and education, as well as geographic distance.[10] Since these distance measures are correlated with the two host country variables (technology and rule of law), as indicated by the VIF values of above 10 for these variables, we did not include them in our main regression analysis. However, our robustness checks with these distance measures led to similar results: the interaction of state with host technology and the interaction of state with shareholder protection have significant and negative effects on the likelihood of an acquisition entry ($p < 0.05$ and $p < 0.10$). In the acquisition subsample, the interactions of state with host technology, rule of law, and shareholder protection all have significant and negative effects on control level ($p < 0.05$ in all three cases). Thus our main findings without the distance measures do not suffer from an omitted variable bias (results are available upon request).

Finally, we used two alternative measures for shareholder protection, the anti-self-dealing index by Djankov et al. (2008) and the revised anti-director rights index by Spamann (2010), whose correlations with the anti-director rights index are 0.60 and 0.53, respectively. We found that consistent with our main results, the interaction of state with the anti-self-dealing index has a significant and negative effect on the likelihood of using acquisition as an establishment mode ($p < 0.05$), and that the interaction of state with the revised anti-director rights index has a significant and negative effect on control level in acquired units ($p < 0.01$).

[10]We thank a reviewer for suggesting this. Geographical distance was computed based on the latitude and longitude of the city where the Chinese firm is located and the capital city of the host country. It was measured as the log of geographic distance in kilometers. The information is from the CEPII.

Discussion and Conclusion

SOEs, Institutions, and Foreign Entry

The strategies of MNEs are influenced by the interplay of institutions in home and host economies (Kostova et al., 2008; Meyer & Thein, 2014, Westney, 1993). This is particularly evident in the case of SO MNEs, where representatives of the state influence decisions not only as regulators, but as owners of the firm. Theoretical considerations suggest that home country institutions provide SOMNEs with preferential access to resources conditional on alignment to government policy objectives (Luo et al., 2010, Wang et al., 2012). This support, however, triggers responses in host economies, where SO MNEs face more intense institutional pressures than their private counterparts to demonstrate their legitimacy. We have examined two avenues through which SO MNEs can adjust their foreign entry strategies to build local legitimacy: by choosing greenfield rather than acquisition entry, and by taking lower control level in acquired units (Fig. 1).

We argue that host country institutional pressures specifically directed at SO MNEs are likely to arise in countries that are technology-rich and/or have strong rule of law, specifically a strong protection of minority shareholders. First, these pressures arise from local stakeholders' perceived technology leakage due to possible transfers of technology out of the country. We find that these pressures inhibit acquisitions by SO MNEs (Table 4, Column (3)), and when they acquire local firms, they acquire lower equity stakes in the local firm (Table 5, Column (3)). These moderating effects work against the direct effects of technology attracting more acquisitions and higher control over acquisitions, which are due to the greater attractiveness of local target firms. Figure 2 further illustrates the differences between SO and PO MNEs; although SO MNEs tend to choose lower control level in response to institutional pressures in countries with strong technology development, PO MNEs are not subject to these pressures and are indeed inclined to increase control level in those countries.

Second, we predicted institutional pressures on SO MNEs to be particularly strong in countries with high levels of rule of law because of inconsistencies between the leading free market ideology and state ownership. We predicted such pressures to undermine foreign acquisitions. We find such opposition in particular confirmed with respect to the role of minority shareholders in foreign acquisitions: where the minority shareholders enjoy strong legal protection, they are more likely to deter takeovers by SO MNEs (Table 4, Column (7)), and in the case of acquisitions to deter high levels of ownership by SO MNEs (Table 5, Column (7)). With respect to the broader concept of the rule of law, we find it to be associated with lower levels of control by SO acquirers (Table 5, Column (5)), but not with fewer acquisitions (Table 4, Column (5)). Furthermore, Figure 3 suggests that while SO MNEs tend to lower control levels in acquired subsidiaries to enhance their legitimacy in countries with strong rule of law, PO MNEs do not face similar levels of pressures and take

more equity control in those countries. Hence pressures for local legitimacy induce SO MNEs to avoid acquisitions, and/or to reduce their level of control in acquired units.

Theory Advancement

These theoretical and empirical analyses suggest several important insights for theory development. First, the emergent field of studies on SO MNEs (Li, Cui, & Lu, 2014; Wang et al., 2012) needs to consider not only institutions in their home environment, but their interactions with businesses and institutions overseas. When SO firms go overseas, particularly to technologically or institutionally advanced countries, they face not only a more competitive market environment but specific challenges to their legitimacy that they need to address. Further theoretical advances in the study of SO MNEs may explore not only the objective advantages or disadvantages of this ownership form, but the beliefs of relevant stakeholders such as host country societies.

Second, the study of MNEs and institutions, which has progressed from analyzing the effects of host country institutions (Kostova, 1999; Meyer, 2001; Meyer et al., 2009a) and home country institutions (Buckley et al., 2007; Meyer & Thein, 2014) to the dual pressures pertaining to MNEs (Kostova et al., 2008), needs to take into considerations that such pressures do not pertain to all firms in a homogenous way. In this paper, we have focused on the institutional pressures in host countries arising from beliefs about SO firms. However, this line of argument can be extended to beliefs with respect to other forms of ownership, such as business groups or family owned firms, or to more fine-grained differentiations of state firms (e.g., listed vs. non-listed SO firms, or central vs. local government controlled SO firms). A starting point for such work may be to hypothesize that firms in the same or similar ownership form find it easier to work together. As a recent high-profile example, the acquisition of Putzmeister in Germany by Sany from China is widely reported to have been facilitated by the fact that both were privately held, and controlling entrepreneurs built a strong personal rapport (Schütte & Chen, 2013). More generally, one might hypothesize that countries with more similar structures of business ownership and governance would enjoy more intensive direct investment relationships and fewer conflicts over investors' legitimacy.

Third, we contribute to the understanding of how MNEs build legitimacy in host societies. Earlier research pointed to the adaptation of practices (Kostova & Roth, 2002; Regnér & Edman, 2014), the formation of joint ventures with local partners (Lu & Xu, 2006; Yiu & Makino, 2002), the use of low profile strategies (Meyer & Thein, 2014), and the proactive use of social responsibility initiatives (Zhao, Park, & Zhou, 2014). We suggest that legitimacy can also be enhanced by using greenfield rather than acquisitions, and by taking lower equity stakes in acquisitions. Future research may explore a broader range of strategies and tactics beyond organizational forms, such as target selections and coopting local opinion leaders. For example, many early Chinese SO MNEs acquired German machine tool

manufacturers that were in insolvent before the takeover.[11] The challenge to build legitimacy after acquiring Dürkopp Adler in Germany has been described by Zhang Min, CEO of ShangGong Group in an interview:

> [Back in 2005], as a Chinese shareholder, the biggest challenge was to be trusted by our partners, employees and banks.…I was asked to attend the employees' meetings to promise that the production would not be moved to China. My answer was clear: According to my strategy, Bielefeld [Dürkopp Adler's HQ] will be the Sales and R&D center for the whole company. I promised to keep the Bielefeld factory as high-end production plant.…After that [the restructuring], Dürkopp Adler immediately became profitable again. And suddenly everybody trusted us because we obviously had made the right decisions. (Boning, 2013)

In this example, a commitment to continue key activities and to provide additional resources helped the investor to build legitimacy and later acquire two other businesses in Germany. More generally, foreign investors take a variety of actions with the aim to build legitimacy, and thus lay out a foundation for longer-run strategies. Hence the concept of host country legitimacy provides a fruitful foundation for studying such strategies.

Finally, we extend the study of entry strategies (Brouthers, 2002; Hennart, 2009; Meyer et al., 2009a) by modeling entry strategies as a two-step decision process, first acquisition versus greenfield entry, and second, the choice of ownership level. Earlier studies raised concerns regarding the assumption that establishment mode and equity level are independent decisions (Kogut & Singh, 1988; Meyer et al., 2009a, b). We suggest that the two step model may provide an avenue forward, especially to explore some of the inconsistencies in the empirical entry model literature (Tihanyi et al., 2005; Zhao et al., 2004). Such research may in particular test whether determinants of equity mode choice are *significantly* different between acquired and greenfield projects, as we found significant differences with respect to the three host country moderators (i.e., comparing results of Tables 5 and 6) even though our subsamples are relatively small for that sort of analysis.

Country Level Moderators

While SO MNEs originate from a variety of different economic and political systems, our theoretical arguments focus on generalizable arguments.[12] Hence a natural question is to what extent home country characteristics moderate the effects that we have hypothesized. In particular, it is possible that host society

[11]In 2004–2005, German machine tool manufacturers Wohlenberg, Schiess, Waldrich Coburg, Kelch, and Grosse Jacquard, all of which were undergoing insolvency procedures at the time, were acquired by, respectively, Shanghai Electric Group, Shanyang Machine Tool Group, Beijing No. 1 Machine Tool Plant, Harbin Measuring and Cutting Tool Group, and Hisun Group, all of which were SO firms (Jungbluth, 2013, Table 1). Similarly, Dürkopp Adler was facing financial challenges but not insolvency at the time of its takeover by the SO MNE ShangGong Group, and has since been successfully restructured while maintaining key operations in Europe (Klöckner, 2013).

[12]We thank the special issue editor's guidance on this matter.

beliefs vary not only by ownership type but by country of origin, and that SO firms from one type of country attract more distrust than those from other countries. Consequently, the effects that we have examined in this study may be moderated by home country level variables. For example, institutional pressures in host countries are, at least in part, a consequence of the perceived support that SO MNEs receive in their home country. In the case of China, these resources are both eclectic and substantial, and include financial resources that enable firms to make investments overseas (Buckley et al., 2007; Li et al., 2013; Luo et al., 2010; Wang et al., 2012). In other contexts, these resources may be far more limited to, for example, support through diplomatic representation, as in Norway (Knutsen et al., 2011).

This suggests considering country-of-origin level moderators such as the degree of resource support available to SO MNEs in their home country, or the direct influence of political actors on SO MNEs. On the other hand, it may also be that state ownership is a convenient smoke screen used by domestic interest groups with protectionist motives, rather than the true cause of the adverse institutional pressures (Nyland et al., 2011). These considerations suggest that institutional pressures directed specifically toward SO MNEs may be weaker when these SO MNEs originate from a home country that has a more market-oriented structure, more transparent corporate governance structures, and less direct support to SO MNEs. Future research may explore these extensions by introducing home context level moderating variables at subnational (Li et al., 2014) or national level.

Even deeper theoretical insight may be gained by exploring the interactions between institutional pressures in home and host countries (Child & Marinova, forthcoming). In particular, institutional pressures on international business engagements with a particular foreign country are in part driven by perceptions about that country (Meyer & Thein, 2014). Applying this line of argument to our research question suggests that *host* country perceptions of the home country institutions supporting SO firms lead to pressure exerted upon SO MNEs. It may be that an attitude toward the *home* country in combination with an attitude toward an unfamiliar organizational form, SO MNE shapes institutional pressures (Child & Marinova, forthcoming). Future research may address this issue by conducting deeply contextualized studies that trace the interactions between institutions in different fields in which an MNE is operating.

This discussion highlights that international business scholars are frequently handling simultaneously general theories with claimed universal validity and distinct local contexts in which these theories are operationalized (Meyer, 2013). In this field, it is thus necessary to pay close attention to the implicit assumptions about context when operationalizing general theory constructs. Moreover, scholars should be more courageous to pursue deeply contextualized theorizing to explain new and perplexing phenomena, without limiting themselves *ex ante* to effects that they would expect to be relevant elsewhere (Tsui, 2007).

Empirical Limitations and Future Research

As usual for empirical studies, limitations arise from the nature of the data set. First, we have prioritized comprehensiveness aiming for an inclusive coverage of listed Chinese firms, starting out from a complete list of firms listed on Shanghai and Shenzhen stock exchanges, and using a wide variety of archival sources to construct our explanatory variables. This approach, however, has limitations in that we have a substantive number of missing variables, especially on host countries because a high share of Chinese investments goes to countries for which commonly used indices are not available. Moreover, our use of archival data precludes capturing perceptions of decision makers of the pivotal variables such as institutional pressures in the host economy. Future research may thus use survey instruments to complement our archival data.

Second, a limitation is the correlation between various variables that measure characteristics of the host economy. In addition to the reported results, we have also experimented with other measures to capture institutional development, but these were highly correlated with the two variables we report, *rule of law* and *shareholder protection*. In addition, we did robustness tests with additional controls, such as cultural and geographic distances between home and host countries and found that our main results remain the same. We did not include these variables in the main analysis because they were highly correlated with other variables we report. Since we already have a wide variation of host countries including both emerging and industrialized economies, further widening the range of hosts is not possible. Perhaps, future research may use a time series approach to investigate the impact of institutional changes over time. However, most institutional variables are fairly stable over time, which imposes limits on the power of such tests.

Third, SO MNEs may use means other than their entry strategy to adapt to or cope with local institutional pressures. On a macro level, they may decide to abstain from direct investment in countries perceived to be hostile; there is some evidence that Chinese SO MNEs indeed invest more in less advanced economies, while private firms focus more in Europe and North America (Ramasamy, Yeung, & Laforet, 2012). On a micro level, they may adapt their business practices to gain legitimacy (Kostova & Roth, 2002). For example, they may retain the local management team, engage with local stakeholders like media and unions directly, or pursue a loose integration strategy (Liu & Woywode, 2013). Future research may explore how such practices of stakeholder engagement and human resource practices relate to institutional pressures on different types of MNEs.

Policy and Management Implications

Policymakers in host countries may be most interested in our findings in view of the controversial nature of SO MNEs in some places (Globerman & Shapiro, 2009; Sauvant, 2010). Our results are consistent with the view that SO MNEs strategically acquire sought after resources such as technologies abroad (Deng, 2009;

Li et al., 2012). However, we also find evidence that they make deliberate efforts to attain local legitimacy in countries where ideological inconsistencies or concerns of technology leakage are likely to be high, notably by using greenfield investments or by taking lower equity stakes in their acquired subsidiaries. Hence in a world of increased diversity of capitalisms, SO enterprises are building bridges across economic systems. Anecdotal evidence from Australia, Canada, and the United States illustrates this pattern. For example, Yanzhou Coal Mining Company successfully acquired Felix Resources in 2009 and merged with Gloucester Coal in 2012 by following the guidance of the Australian Treasury by, among others, being listed on the Australian Securities Exchange and reducing equity shares in subsidiaries (Grant, 2012). From a host country perspective, such cooperative ventures provide opportunities to get to know an unfamiliar type of foreign investor, and experiences with that cooperation will then determine whether the investor, and firms of similar type, merit legitimacy in the host society. Such a path is like the evolution of private foreign investment into China, where in the 1980s private capital was considered illegitimate by key local players, and constrained by both normative and regulatory rules, such that foreign investment occurred mainly in joint ventures. Over the next three decades, host institutions evolved, private ownership gained legitimacy, and foreign investors increasingly take full ownership, and even acquire local firms.

For home country politicians, especially those involved in SO firms as owners, our study points to limits of political influence over such firms when they operate abroad. When SO firms operate in a competitive market environment, their ability to pursue political objectives is constrained by the rules of the game in the host society, which are designed to create a level playing field (or at least a field not skewed in favor of a foreign investor). Therefore advantages enjoyed by SO firms at home may turn into disadvantages abroad because they trigger adverse host country institutional pressures. In other words, the association with the home government is likely to create additional entry barriers on SO firms and force them into suboptimal organizational forms. Home country politicians may thus want to strengthen SO MNEs' ability to earn legitimacy in host societies. In this study, we have studied how adaptation at the level of the subsidiary can strengthen local legitimacy. Beyond this, SO MNEs themselves may gain legitimacy abroad if they adopt more transparent structures of corporate governance and reduce the direct involvement of political actors in corporate decision processes. For example, the EU bans state aid to SO companies (with some exceptions) with the aim to create a level playing field between SO and PO firms (Morgan, 2009). Such higher level changes may reduce the need for subsidiaries to locally overcome distrust in host societies.

For managers in SO enterprises, we show how they can manage the additional institutional pressures they are exposed to in host countries by making the attainment of local legitimacy a guiding principle for their foreign entry strategies. In fact, such strategies may turn to their advantage in the long run. Several studies show a tendency for emerging economy MNEs to undertake large overseas

investments that generate weak financial performance (Aybar & Ficici, 2009; Chen & Young, 2010; Hope, Thomas, & Vyas, 2011). With easy access to financial resources yet limited experience in international business, they are taking high risks. By engaging with stakeholders in host countries, SO MNEs can not only demonstrate that they merit legitimacy, but lower their investment risk and create learning opportunities. Once they have built up local competences and legitimacy, they may then also be able to run wholly owned subsidiaries without being challenged for their legitimacy.

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Part III
The Future of Studies of State-Owned Multinationals

State-Owned Enterprises as Multinationals: Theory and Research Directions

Aldo Musacchio and Sergio G. Lazzarini

Introduction

State-owned multinationals (SOMNCs) have gained a preeminent role in the global economy.[1] For instance, in 2005 if a researcher had searched for SOMNCs among the top 100 largest firms by revenues in the world in the Fortune Global 500, there would have been a few very obvious findings, such as the savings bank Japan Post or the Mexican oil company Pemex, or perhaps the Brazilian oil giant Petrobras or Russia's oil and gas producer Gazprom. Yet, we would have found very few state-owned firms from China, especially at the top of the list. In fact, in 2005, among the top 20 largest firms there would have been no state-owned companies other than Japan Post. In contrast, in 2016, SOMNCs from China dominated the list of the top 5 largest firms by revenues and there were 16 Chinese SOMNCs in the top 100 list. Furthermore, among the largest 100 firms by revenue, there were 27 SOMNCs. How should we think of these SOMNCs compared to their predecessors? How should we think of them compared to their private peers?

There are three important characteristics of today's SOMNCs that are different from the SOMNC phenomenon of the 1970s or 1980s. First, today's SOMNCs

[1]If we follow the definition of Ahroni (1986) and we conceptualize state-owned enterprises as firms in which the state has ownership *or* control and as *enterprises* that effectively produce and sell goods and services, then it is easy to see the recent rise of SOMNCs to the center stage of the world economy by tracking the role of these firms among the largest multinationals in the world.

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have a variety of ownership schemes in which the government often shares ownership and/or control with the private sector. In other words, these SOMNCs are different from our fathers' SOMNCs, which were typically wholly owned state companies. Out of the 27 SOMNCs in the Fortune Global 500 list in 2016, in contrast, there are five in which the state is a minority shareholder, 22 in which the government is a majority shareholder, and only a handful in which the government is the *only* shareholder. That is, these large SOMNCs are mostly publicly traded corporations in which the government *de facto* shares ownership, and sometimes control, with private investors.[2]

Second, the corporate governance model of these SOMNCs has made them hybrid firms that no longer just respond to the interests of governments (Bruton, Peng, Ahlstrom, Stan and Xu 2015, Musacchio, Lazzarini and Aguilera 2015). Nowadays, many SOMNCs are large publicly traded corporations that respond to both the interests of the government and those of (minority) private shareholders; their boards sometimes have independent directors; they usually have professional managers with experience in the industry; and they compete head to head with the largest private MNCs in the world. Furthermore, publicly traded SOMNCs have to follow the accounting standards of stock exchanges, which commonly require the regular disclosure of financials that follow international accounting standards (either IFRS or GAAP). These financials are usually also audited by accounting firms with an international reputation. These improvements in transparency have also been accompanied by improvements in monitoring: SOMNCs are now commonly monitored by an army of analysts, credit rating agencies, and investors (Musacchio and Lazzarini 2014).

Finally, leading SOMNCs come from emerging markets, rather than from advanced economies. In the past – 20 or 30 years ago – there were a variety of SOMNCs from advanced economies expanding to emerging markets, mostly for market- and resource-seeking reasons (Anastassopoulos, Blanc and Dussauge 1987). Today's SOMNCs are commonly from developing countries, and are making acquisitions, joint ventures, and greenfield investments in both advanced and emerging economies. In fact, between 1990 and 2008, Chinese SOMNCs were the largest and most frequent global undertakers of cross-border acquisitions. Those Chinese SOMNC deals represented 17% of all cross-border acquisitions by SOMNCs and 23% of total deal value among SOMNCs (Karolyi and Liao forthcoming).

In the next section, we explain how SOMNCs have been reinvented and morphed into hybrid organizations in the last thirty years, and we thus provide reasons to revise the existing understanding we have of these firms. The third section modifies the existing theory on state-owned enterprises (SOEs) using a simple model of governance with principal-agent and principal-principal conflicts. We argue that with this new model we can explain most of the contradictions implicit in the objectives of SOMNCs. Still, the next effect of many of those

[2]Information from the Fortune Global 500 2016 page, available at http://beta.fortune.com/global500/list, accessed October 15, 2016.

contradictions is ambiguous, therefore requiring new data to be tested. The fourth section describes the challenges of working with data on SOMNCs and provides some suggestions to improve data collection. The fifth section concludes the paper by providing a few ideas for possible future research agendas on SOMNCs.

The Reinvention of State Multinational Capitalism

In order to understand why SOMNCs today are different from our fathers' SOMNCs, we need to understand how these firms were reinvented and reformed since the 1980s. In this section, we tell this story of reinvention and highlight the new governance features of SOMNCs.

After decades of socialism, nationalizations, bailouts, and the creation of new government-owned enterprises, governments in Europe, the Americas, Africa, Asia, and Oceania had accumulated hundreds (or thousands, in the case of Russia and China) of state-owned firms. By the 1970s, most governments around the world, with the notable exception of the United States, had large SOEs operating in a variety of industries, from airlines, shipping, and petroleum to manufacturing, aeronautics, and consumer goods. As most of those firms had been operating in a relatively stable global environment, their inefficiencies were either not evident or were not seen as burdensome for their home governments. In fact, these SOEs were perceived as good vehicles to reduce unemployment and to create a mass of middle-class political supporters. Yet, with the financial instability and oil shocks of the 1970s, those SOEs started to face significant financial deficits and to accumulate large debts in foreign currencies. The disequilibria compounded when Paul Volcker, as Chairman of the Federal Reserve Board in the United States, raised interest rates from 10% to close to 20% per year between 1981 and 1982, generating one of the largest liquidity shocks in modern history. As a consequence, credit lines for sovereigns and SOEs dried up quickly, exchange rates depreciated against the US dollar, and governments had to bail out SOEs en masse (Musacchio and Lazzarini 2014).

Therefore, the reinvention of state ownership began when, faced with severe budget deficits and large debts, governments were forced to undertake large-scale privatization programs and a radical set of institutional reforms. A large academic literature then supported the privatization of large SOEs on the basis of the inefficiency of such firms compared to private firms (see e.g. Megginson and Netter 2001 for a review).

Despite all the evidence of the inefficiency of SOEs, governments did not pursue sweeping privatization programs across the board. On the contrary, severe political pressures led them to pursue a combination of full and partial privatizations instead. These partial privatizations were a way to reduce the financial dependence of SOEs on the government budget as well as a way to direct SOEs to act more like private firms, i.e., following profit-seeking objectives.

A recent literature in strategy and international business has examined some of the theoretical implications of the post-reform, hybrid nature of these state-owned firms (Bortolotti and Faccio 2009, Boubakri, Cosset, Guedhami and Saffar 2011, Bruton,

Peng, Ahlstrom, Stan and Xu 2015, Christiansen 2011, Musacchio, Lazzarini and Aguilera 2015). According to this literature, the main difference between the new SOEs and SOMNCs and their pre-privatization predecessors is not only the resilience of the new forms of state-ownership, but also their importance at the national and international level. In fact, we could explain the reinvention of SOMNCs in three major characteristics: (a) the fact that they have better governance (i.e., more monitoring), (b) the fact that they changed their objectives when they became hybrid organizations, and (c) the fact that they have internationalized.

Major Corporate Governance Changes in SOMNCs

SOMNCs now have new corporate governance structures and more stringent disclosure requirements. For instance, they are closely monitored by an army of investment bank analysts, institutional investors, and credit rating agencies (Baysinger and Butler 1985, Peng 2004, Poczter 2012, Shapiro and Willig 1990). Furthermore, in some of the largest SOMNCs, boards of directors have appointed professional managers with relevant experience in the sector, and have also established boards that have independent directors who can act as a check and balance for management discretion (Gupta 2005).

A clear illustration of these governance changes comes from the oil and gas sector, an industry dominated by SOMNCs. In this sector, in which governments for strategic reasons avoid privatization at all cost, there has been a significant transformation in the governance of the so-called national oil companies (NOCs). Out of a group of the 30 largest national oil companies, Musacchio and Lazzarini (2014) show that 15 are now publicly traded corporations. Out of these 15 publicly traded firms, two ended up having the government as a minority shareholder (i.e., Eni in Italy and GDF Suez in France). Still, out of the 30 NOCs they study, 18 have external (independent) directors on their boards. That means that companies like Saudi Aramco or Pemex, which have not privatized any shares, have still undertaken governance reforms that included having independent directors on their boards. Moreover, out of the 30 NOCs, 13 have budgetary independence from the government, meaning they can undertake large investment projects without having to run them through budget approval. Finally, 18 out of these 30 firms have financials audited by internationally renowned accounting firms,. although not all of them make their financials public. Finally, most of the NOCs that are publicly traded corporations have professional managers with experience in the industry. All of these characteristics represent significant departures from the way in which most governments managed SOMNCs in the past.

It is important to highlight the cases in which governments privatized control of SOEs and kept only minority stakes (Bruton, Peng, Ahlstrom, Stan and Xu 2015, Musacchio and Lazzarini 2014). Even if these firms are not formally controlled by the state, there are a variety of channels through which governments exert influence on their management, especially because these firms enjoy a variety of rents and privileges associated with being close to the government. Because there are private shareholders in control of these firm, we would expect them to behave

more like similar private firms (Inoue, Lazzarini and Musacchio 2013, Vaaler and Schrage 2009). That is, on the one hand, minority government ownership can bring benefits to these firms by improving their management and incentives and even by reducing financial constraints. On the other hand, the rents that accrue to these firms and the representation that governments have on the boards of directors of these firms also give them disproportional leverage vis-à-vis the management, relative to other minority shareholders. Furthermore, in many of these privatized firms in which the government is a minority shareholder, the sovereign also holds veto rights over important decisions, such as large M&As, through so-called golden shares (Faccio and Lang 2002).

There are several channels through which states hold their minority shareholdings, either through direct ownership by the Treasury or state-owned banks, through state-owned holding companies, or through sovereign wealth funds (Aguilera, Capapé, and Santiso, 2016). Governments can also indirectly influence and control corporations through the shares owned by state-owned insurance companies (e.g., the Life Insurance Corporation in India) or the pension funds of SOEs (e.g., Previ or Petros funds in Brazil, which together are probably the largest institutional shareholders in Brazil) (Lazzarini 2011).

Profit, Social and Diplomatic Objectives in SOMNCs

Another important change in the way SOEs, especially SOMNCs, operate has to do with the fact that by having a hybrid nature (i.e., mixed private and state ownership), they also now respond to profit-maximization objectives. The clearest difference between private MNCs and SOMNCs is that they have different objective functions. MNCs tend to focus more on maximizing enterprise value (with some concern for social responsibility), while managers in SOMNCs have to pursue a variety of social objectives at home and, often, diplomatic/political objectives abroad. They may invest in specific countries or deals simply because their government wants to propogate an ideology or support a country or government. What is very interesting about the new SOMNCs is that they cannot *only* pursue those social and diplomatic objectives. The fact that SOMNCs have private shareholders and that analysts, rating agencies, and other actors are monitoring their actions means that managers in these firms cannot deviate too much from the profit-seeking objective. That is, these hybrid firms operate with hybrid logics and there is now more overlap in objectives between private MNCs and SOMNCs.

The New Internationalization Patterns of SOMNCs

Finally, some of the largest new SOMNCs, with improved corporate governance and more financial transparency, have become global leaders in their industries. These SOMNCs, however, now come mostly from emerging markets. Aside from eight SOMNCs from OECD countries, all of the other 19 SOMNCs in the top 100 Global firms are from emerging markets. In fact, aside from Pemex, most of the largest SOMNCs in the world come from the so-called BRIC countries

(Brazil, Russia, India, and China). Chinese SOMNCs are the largest acquirers or firms in cross-border transactions.

These SOMNCs from emerging markets have expanded to tens of countries. They are particularly attracted to the natural resource sector and operate in extremely difficult political environments (Ramasamy, Yeung and Laforet 2012). The typical deals we hear about are those of a large SOMNCs acquiring a natural resource company in a developed country, such as the Chinese oil firm CNOOC's acquisition of Canada's Naxen, or cases in which SOMNCs get a concession in Africa, such as the Chinese oil company Sinopec's deals with the government of Angola to secure oil concessions.

Yet these SOMNCs from emerging markets have also done a variety of cross-border transactions to acquire state-of-the-art technology and managerial know-how. In 2007, for instance, China Mobile, a telecommunications firm controlled by the Chinese government, entered Pakistan through the acquisition of Paktel, a local telecom. Strategic acquisitions to obtain technology and market access simultaneously, however, have been fewer as well as more controversial, such as the Chinese technology company Lenovo's acquisition of IBM (Guo and Clougherty 2015, Rui and Yip 2008).

In sum, the transformation of SOMNCs in the post-privatization scenario has created a new global landscape in which private MNCs compete head-to-head with hybrid SOMNCs. These SOMNCs have new contractual arrangements leading them to perform like private firms and to internationalize following patterns similar to those of private firms.

Still, SOMNCs have conflicting logics that should lead them to behave in ways that diverge from what comparable private MNCs would do. That is, a thorough assessment of the behavior of SOMNCs requires a careful analysis of the benefits and costs of state ownership. Only through that theoretical lens can we start to develop an understanding of the new hybrid SOMNCs.

Why Do SOMNCs Exist?

There are three views that explain why SOMNCs' objectives are different from those of comparable private MNCs: The developmental view, the social view, and the political view. All of these views impose a variety of benefits and costs on SOMNCs, related to both principal-agent and principal-principal conflicts.

First, according to the *industrial policy* view, SOEs exist to solve three market failures: capital market failures, coordination problems, and information problems related to the cost of figuring out if a country or industry can develop new capabilities in unexplored areas (i.e., what Dani Rodrik calls "discovery costs"). Governments solve capital market failures using development banks, state-owned commercial banks and other investment funds. Coordination failures arise when the private sector does not want to undertake the complementary investments necessary to develop a new industry or cluster of industries (e.g., railways to integrate mines with steel or an information highway to facilitate the development of information technology clusters) (Amsden 1989, Rodrik 2004). Finally, there are

discovery costs that can generate positive information externalities to facilitate entry into new industries or areas of knowledge. Sometimes an entrepreneur needs to incur the costs to find out if developing a product or service in a country is actually feasible and/or profitable, but once that entrepreneur incurs the cost others can free ride and compete with the entrepreneur directly. In those instances, governments can subsidize the process of discovery or can create or orient state-owned firms to incur those costs (e.g., most developing country governments create state-owned firms to develop the first nuclear energy facilities in their countries).

Thus, according to the *developmental view*, governments may use SOEs to subsidize key inputs for local industries or to develop new technologies locally (Ramamurti 1987). Perhaps the most well-known example of a state-owned firm partnering with the private sector to explore a new industry is that of NASA, the United States' National Aeronautics and Space Administration, which developed a variety of patents and new technologies for space exploration, jet propulsion, and communication. One of those technologies (i.e., the internet) later on was used by other companies to develop entirely new areas of information technology (Block and Keller 2015, Jaffe, Fogarty and Banks 1998).

Second, according to the *social view*, governments can impose social objectives on their SOEs and SOMNCs, which can range from demanding that they invest in projects that accrue benefits to local communities or provide employment during downturns (Ahroni 1986, Bai and Xu 2005, Shapiro and Willig 1990, Shirley 1989). State-owned firms are, in fact, commonly charged with heavy social responsibility objectives, related both to the country and to the communities in which they operate, and especially to their workers. SOEs, for example, have heavy pension burdens, offer special health insurance for their workers, and provide stable jobs.

Finally, the *political view* sees SOEs as instruments of the politicians who control them. That is, governments can additionally charge SOEs with a variety of political objectives, such as using their output to benefit specific groups of voters (e.g., subsidizing the cost of gasoline) or well-connected industrialists (Boycko, Shleifer and Vishny 1996, Vickers and Yarrow 1988). The political view is a major theoretical strand justifying the common view of state-owned firms as inefficient organizations subject to the "grabbing hand" of governments (Shleifer and Vishny, 1998). In a global context, as we discuss later, SOMNCs can also be used to support geopolitical alliances or resource acquisition objectives.

The Puzzle of SOMNCs

These three views of why SOEs exist are limited in explaining the internationalization of SOMNCs. According to Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy (2014) there are two puzzling behaviors in SOMNCs. On the one hand, it is not clear why they internationalize if the developmental objectives of SOEs are to solve market failures at home. That is, according to the developmental view (as we explained earlier), SOEs are supposed to solve market failures at home, either to reduce capital market failures or to solve coordination or information costs. Obviously, SOEs may internationalize to secure access to

raw materials for projects at home, thus minimizing transaction costs at home (Ramasamy, Yeung and Laforet 2012), yet those concerns alone cannot explain all of the internationalization of SOMNCs.

The second puzzling behavior of SOMNCs has to do with internationalization that is not profit-seeking (Anastassopoulos, Blanc and Dussauge 1987). That is, when the strategic, diplomatic, or national security interests of governments influence the actions of managers in SOMNCs, these firms will likely pursue internationalization strategies that counter the profit-seeking objectives of SOMNCs (Cuervo-Cazurra et al. 2014; pp. 10–12). This could be manifested in excessive risk-taking behavior, such as expanding to risky host economies, i.e., countries that are culturally and economically too distant; or using entry strategies that are too risky, i.e., acquiring low stakes in joint ventures in risky host countries, or preferring joint ventures versus wholly owned subsidiaries once we hold country risk constant. In these non-profit-seeking, cross-border operations, therefore, SOMNCs could end up paying higher premiums than what similar private MNCs would pay, given that governments may get other benefits from such transactions (Bass and Chakrabarty 2014, Guo, Clougherty and Duso 2011).

Agency Costs in SOMNCs

If SOEs and SOMNCs have changed in significant ways, we need to acknowledge that we need new theoretical ways to think about them. In this section, we develop a new theory of SOMNCs rooted in agency theory. According to Cuervo-Cazurra et al. (2014) there are a variety of agency conflicts in SOMNCs, relative to private MNCs. These agency conflicts are three-fold: (a) there is a principal-agent relationship between the citizens of a country (the outright owners of SOMNCs) and the politicians tasked with monitoring and running SOMNCs; (b) there is a principal-agent conflict between the government (i.e., the politicians in power) and the managers of SOMNCs; and, (c) there is a principal-agent problem between the managers of SOMNCs and the managers of its subsidiaries. In this chapter, we focus on the second problem.

The starting point is the key differentiating factor between SOMNCs and private firms: SOMNCs have different objective functions than private enterprises. The myriad objectives that SOMNCs have to deal with due to their relationship with the government can generate a variety of benefits and costs (see Lazzarini and Musacchio, 2016). On the one hand, developmental objectives may produce *rents* that benefit private shareholders and may increase firm value. Such rents are generated when governments provide SOMNCs with subsidies, tariff and non-tariff barriers, or monopoly rights (Buckley, Clegg, Cross, Liu, Voss and Zheng 2007, Lazzarini 2015, Meyer, Ding, Li and Zhang 2014). Additionally, given the nature of government ownership of publicly traded SOMNCs, these firms can benefit from having a long-term patient investor mentality. Patient investors can allow SOMNCs to undertake riskier projects that require more time to mature or break even and can also help firms survive during times of crisis (Beuselinck, Cao, Deloof and Xia 2013, Borisova, Brockman, Salas and Zagorchev 2012).

Furthermore, governments can bail out SOMNCs when necessary (Faccio 2006, Song, Nahm and Zhang 2015, Vaaler and Schrage 2009).

Beyond these benefits, the fact that SOMNCs face social, political, and diplomatic objectives can generate a variety of agency costs. Traditionally, the literature on SOEs has focused on principal-agent problems that have to do with the asymmetries of information that governments face to monitor the managers of these firms and the fact that SOE executives lacked incentive-compatible contracts that would align their incentives with those of the government (Bai and Xu 2005, Firth, Fung and Rui 2006, Shirley and Nellis 1991). This principal-agent problem is usually associated with the information asymmetry between the manager of an SOE and the ministry or department that monitors her because the former knows more than the latter about the enterprise, about its costs, and about the kinds of benefits that various social groups get from its goods and services. Because it may be too costly for ministries and departments to obtain information to monitor SOE executives, managers can take advantage of their private information to undersupply the goods and services they produce, to extract personal benefits from the SOEs, either for themselves or for their cronies, or simply to shirk their responsibilities (Moe 1984, Shapiro and Willig 1990). According to the literature, this problem is further compounded by the fact that SOE managers do not have incentive-compatible contracts to align their incentives with those of the government (the principal) and they do not have pay-for-performance contracts to incentivize them to run profitable firms (Shleifer 1998). Finally, SOE managers do not reap the benefits of increased profitability or efficiency, but "bear many of the costs (i.e., angry workers, disgruntled suppliers)…Thus, managers of SOEs have no incentive to improve efficiency or develop innovative new products" (Megginson 2005; p. 39).

The principal-agent problem can also be made worse by the "multiple principals" problem. This problem is related to the fact that there are multiple ministries, board members, and market actors acting as monitors, which could lead to free-riding among them. Because SOEs are usually under the responsibility of their sectoral ministry, of the Ministry of Finance (MoF), and of other government agencies, it is not clear who ends up investing the bureaucratic time to actually monitor the firm, because it is also not clear which agency reaps the benefits of such effort. Therefore, ministries delegate monitoring to each other in an effort to minimize those bureaucratic costs, ultimately creating a free-riding problem and overall weak monitoring (McCubbins, Noll and Weingast 1987). Musacchio, Pineda Ayerbe and Garcia (2015) document how SOEs in Latin America are officially monitored by the Ministry of their sector (e.g., oil companies are monitored by the Ministry of Energy) while their finances are monitored by the MoF or a central agency or department. Yet in practice, most of the monitoring is left up to the MoF, which has limited time and human resources to monitor the tens of firms it oversees (under some calculations, each senior person in the MoF has to oversee more than three SOEs).

SOMNCs, however, can avoid or reduce many of those agency costs. In SOMNCs governments share ownership with private investors, who have clear

profit-seeking objectives. Furthermore, given the new governance arrangements in SOMNCs, in which boards of directors, analysts, institutional investors, credit rating agencies, and minority shareholders can monitor the actions of managers, we would expect fewer deviations from profit-maximizing objectives (Pargendler, Musacchio and Lazzarini 2013). That is, one of the main reasons why governments have reformed some of their largest SOMNCs is because they want them to be profitable (to avoid another fiscal crisis like that of the 1980s) and having private shareholders sharing ownership of these firms guarantees profitability will be high on the list of objectives of these firms. Continuous deviations from the profitability objective now lead to lower stock market prices, more costly debt issues, credit rating downgrades, and continuous criticism from analysts and the press. Thus, we would expect that PA problems have been reduced in modern SOMNCs.

Still, since SOMNCs have an implicit (or explicit) soft-budget constraint, there are perverse incentives that can induce executives to deviate from government and shareholder objectives to pursue their own empire-building agendas, or to engage in acquisitions on the basis of hubris simply because they know the government will bail them out (Kornai 1979, Seth, Song and Pettit 2000, Shleifer and Vishny 1998).

In publicly traded SOMNCs there is an additional type of agency problem, referred to in the literature as the principal-principal problem. This problem has to do with the fact that governments, as controlling shareholders, or as influential shareholders, can sway the strategic decisions SOMNC managers make to benefit themselves at the expense of private shareholders (Dharwadkar, George and Brandes 2000, Jiang and Peng 2011, Young, Peng, Ahlstrom, Bruton and Jiang 2008). Governments can, for instance, extract financial resources from SOMNCs to benefit specific political groups, e.g., they can control prices, or ask SOMNCs to take on specific social investments or subsidies, etc. (Boyko, Shleifer and Vishny 1996, Jones 1980, Kikeri and Nellis 2004, Shirley and Walsh 2000). In Table 1 we summarize the principal-agent and principal-principal problems that SOEs face.

In sum, SOMNCs have a variety of agency costs, but also enjoy a variety of rents from being associated with the government. Therefore, the net effect of state-ownership on shareholder value is ambiguous (Lazzarini and Musacchio, 2016). On the one hand, majority-owned SOMNCs can get large rents from being associated with the government. Given all the reforms to large SOMNCs in recent years, we assume that the principal-agent problems have been reduced from the period in which these firms were wholly-owned by the government. Still, even if such governance reforms have reduced some of the most basic principal-agent costs, there is still ample room for SOMNCs to suffer from principal-principal conflicts that stem from their hybrid nature (Bruton, Peng, Ahlstrom, Stan and Xu 2015). When governments are minority shareholders, the size of the rents SOMNCs enjoy should be lower, as these firms depend less on the government for survival. Additionally, the costs stemming from principal-agent and principal-principal conflicts should also be lower, as the company is run by private managers with private investors monitoring their performance. Therefore, we would expect the costs of government ownership to also be lower. Overall, in both models, the

Table 1 Principal-agent and principal-principal problems in state-owned enterprises

Typology of problems	Main issues	How does the problem manifest and how does it affect SOE performance?
Two principal-agent problems:	Information asymmetry and weak incentives	-Managers have more information than their monitors. They do not report transparent figures. -Managers do not have high-powered incentives or pay-for-performance contracts. -Soft-budget constraint -Managers do not seek profitability and pursue their own agendas
	Multiple-principals problem	-Multiple Ministries, Departments, and Agencies in charge of monitoring SOEs, but they all want to shift the cost of monitoring to each other leading to weak monitoring
Principal-principal problem	Governments deviate SOEs to pursue agendas that benefit politicians or their cronies	-Governments extract resources from SOEs in an ad hoc fashion (e.g., control prices), hurting shareholder value for minority shareholders -Governments obtain political rents from such extraction because they benefit industrialists (e.g., by selling inputs cheaply) or voters. -Governments extract resources from SOEs to finance deficit, leaving them without resources to finance capital and operational expenditures.

majority and minority state ownership models, the expected net result of government ownership is ambiguous.

Now we integrate our expanded agency theory of SOEs with the puzzles that arise when those enterprises become state-owned multinationals. One way to explain these differences in internationalization patterns between private MNCs and SOMNCs is to use the new agency theory of SOEs we developed in the previous section.

We argue that by zooming into the second kind of principal-agent problem and expanding it to include not only traditional principal-agent problems but also principal-principal conflicts, we can explain the two puzzling behaviors of SOMNCs. The idea is relatively simple. On the one hand, the pursuit of internationalization agendas that escape the developmental, social, and political objectives of SOMNCs can be explained by the principal-agent problems in these firms. Due to information asymmetries and the multiple principals problem, governments end up monitoring SOE managers weakly. In such scenarios, managers of SOMNCs have leeway to pursue their own internationalization agendas, pursuing a variety of strategies to expand their business abroad, from greenfield, to wholly

owned subsidiaries, to even more risk-bearing strategies like acquiring minority shareholder positions in risky environments. These transactions can benefits managers for a variety of reasons, be it for empire-building purposes or for hubris (Seth, Song and Pettit 2000).

On the other hand, the non-profit-seeking internationalization strategies can be explained as a product of either principal-agent problems or principal-principal conflicts. Governments can impose objectives on SOMNCs that go beyond the traditional developmental, social, and political goals. For instance, governments can use their power to steer SOMNCs to pursue cross-border transactions that benefit them diplomatically or militarily, or that allow them to export a specific ideology (Buckley, Clegg, Cross, Liu, Voss and Zheng 2007, Cuervo-Cazurra, Inkpen, Musacchio and Ramaswamy 2014).

There are at least three implications that follow from our theory. First, if principal-principal conflicts (and some principal-agent problems) lead SOMNCs to behave in ways that depart from pure profit-maximizing behavior, then we would expect these firms to pursue very different internationalization agendas than comparable private firms, both in the decision of where to go and what entry strategy to choose. For instance, if governments are pushing managers to make internationalization decisions based on diplomatic and strategic objectives, then, everything else held constant, SOMNCs would end up pursuing mergers or acquisitions in which the risk-return trade off is higher (e.g., the country is riskier or the transaction costs are higher) than it is in the countries where similar private MNCs would go. That is, if a cross-border transaction is guided by a profit motive, then the actions of SOMNCs should be similar to those of comparable private firms (to a large extent), but if the desire the go abroad includes other motives that may trump the profitability motive, then SOMNCs should have a lower hurdle rate than similar private MNCs, or they should calculate larger synergies in a similar deal, simply because they value non-monetary returns from these deals. The same dynamic would take place simply because SOMNCs have a soft-budget constraint that automatically lowers their hurdle rates and allows them to take on more risk relative to a similar private company (Bass and Chakrabarty 2014, Guo, Clougherty and Duso 2011). This can be initially thought of as observing SOMNCs going into riskier jurisdictions, with more cultural distance, or with worse institutional environments.

Proposition 1. *SOMNCs are more risk prone than comparable private MNCs.*

Second, SOMNCs have benefits that private MNCs do not have, such as enjoying a soft-budget constraint or having a large shareholder with a long-term, patient investor mentality. These advantages should lead managers to pursue significantly different risk-taking strategies when they internationalize their firms. In other words, the ownership benefits of SOMNCs may allow their managers to take on more risk that their private counterparts and, for a similar deal, choose larger ownership stakes in a joint venture than what their private counterparts would choose (Cui and Jiang 2012, Ramasamy, Yeung and Laforet 2012). This capacity to take on more risk and to cope with more risk in joint ventures comes from three features of SOMNCs. First, since they have a soft-budget constraint they can take on more risk. Second,

SOMNCs have more relational assets or networking skills that allow them to deal with governments in regulated industries abroad (Buckley, Clegg, Cross, Liu, Voss and Zheng 2007, Dunning 2003). Finally, beyond their relational assets and/or networking skills, having the government as a backer implies that these firms have a diplomatic clout of support behind them that reduces the perceived risk in these transactions. This is similar to what private firms do when they go into emerging markets with the support and backing of the World Bank. Since the World Bank has other levers over the host countries, private firms (e.g., in mining) try to use the diplomatic backing of the World Bank to reduce risk in the transactions—they also use political risk insurance and other instruments. Governments can provide those services for their SOEs and can use other levers, such as diplomatic and financial relations, to support specific cross-border deals by SOMNCs.

Proposition 2. *SOMNCs would prefer higher ownership stakes in cross-border transactions than similar private MNCs.*

Third, given that both principal-agent and, especially, principal-principal problems can play a role in determining the value of cross-border operations, SOMNCs could end up paying more for the same deal than private MNCs. On the one hand, as we explained earlier, SOMNC managers may have to pursue deals due to political or diplomatic objectives and in which the returns of the deal are valued higher simply because there are non-monetary considerations at play. On the other hand, if there are principal-agent problems, like weak monitoring, this could allow SOMNC managers to have significant discretion to pursue internationalization agendas following managerial hubris. That is, we would observe many transactions in which SOMNCs pay a premium based on hubris and not on fundamentals (i.e. we would observe more miscalculations of the synergies between acquirer and target firms) (Chen, Musacchio and Li 2016, Seth, Song and Pettit 2000). If managers end up having more discretion to pursue their agendas or if governments are capable of steering SOMNCs to pursue deals that benefit them ideologically or diplomatically, then one would expect managers of SOMNCs to overestimate the value of the synergies in a cross-border transaction and to be willing to pay a higher premium that what comparable private MNCs would pay for a similar transaction (Bass and Chakrabarty 2014, Guo, Clougherty and Duso 2011).

Proposition 3. *SOMNCs systematically pay larger acquisition premia than comparable private MNCs, in comparable deals.*

The Challenge of Working with SOMNCs Data and Some Solutions

Our lack of knowledge of contemporary SOMNCs has a lot to do with the fact that they are a relatively recent phenomenon for which we have scant data. Furthermore, collecting new data has been one of the major obstacles to pursuing systematic research on the topic.

There are three challenges of working with SOMNCs data. First, it is not very clear how to identify SOMNCs that are not wholly owned by their home

governments. That is, the first challenge when collecting data about the internationalization of SOMNCs is identifying both majority- and minority-owned SOMNCs. The difficulty stems from the fact that governments do not always hold stakes directly in these SOMNCs. Instead, governments use a variety of holding companies and complicated pyramid ownership schemes to hold shares in SOMNCs. Therefore, the first challenge is to figure out whether the firms researchers want to study are majority- or minority-owned SOMNCs. A shortcut is to use a variety of databases, such as Zephyr or Orbis from Bureau Van Dyk, to code ownership status (i.e., government vs. private). Yet those databases suffer from the problem we described previously. They usually code SOMNCs according to direct ownership and are less accurate when it comes to coding ultimate ownership. In fact, often times one has to follow the pyramid of ownership two levels up (or more) in order to track ultimate ownership. Very few databases offer that capability and even when they offer it they are limited in their capacity to identify state ownership.

The second challenge of working with SOMNC data is that oftentimes these firms use special purpose vehicles or subsidiaries chartered in the Cayman Islands and other jurisdictions to do their cross-border transactions. Therefore, tracking these cross-border transactions is always imperfect. There are a few exceptions, such as the databases that track cross-sections of subsidiaries held by SOMNCs from a specific country. These databases exist for China and are commonly used in research projects (Buckley, Clegg, Cross, Liu, Voss and Zheng 2007), but they may also miss some of the deals that SOMNCs do through their more obscure subsidiaries. For instance, it is common practice in studies of cross-border transactions to ignore deals in which the acquirer is domiciled in overseas territories of the United Kingdom, such as the Bahamas, British Virgin Islands, Cayman Islands, Guernsey, the Isle of Man, etc. (Karolyi and Liao forthcoming). However, SOMNCs that want to obscure their cross-border transactions can use their subsidiaries in those locations to pursue deals.

The third challenge of working with SOMNC data is that most of the detailed databases we have about the cross-border operations of these firms come from China. That is, most of what we know about SOMNCs should be labeled correctly as being China-specific. A common justification to publish China-specific papers about SOMNCs is that a large percentage of cross-border transactions are actually led by Chinese SOMNCs. Yet, according to detailed estimates of the transactions that took place between 1990 and 2008, Chinese SOMNCs undertook 23% of all the SOMNC cross-border acquisitions during that period, which is close to $100 billion in transactions by Chinese SOMNCs out of a total of $435 billion for all SOMNCs. Furthermore, those transactions were less than 1% of the total amounts for all acquisitions worldwide in the same period. This means that we still have a lot of work to do in order to explain how the rest of the SOMNCs worldwide are behaving.

One example of the kind of confusion we have due to building theory from Chinese data alone is the following. Using a database of Chinese acquisitions, Guo et al. (2011) show that SOMNCs, on average, pay more than private Chinese firms when they pursue cross-border acquisitions. Yet, a recent paper uses a more

comprehensive sample of global acquisitions between 1991 and 2008, and finds no systematic differences between what SOMNCs and private firms pay (Karolyi and Liao forthcoming).

The final challenge of working with SOMNC data is that researchers have no consensus as to what constitutes state minority ownership of a company. That is, it is extremely difficult to differentiate state minority ownership from ownership stakes held by funds that are supposed to be professionally managed with the objective of obtaining returns for their investors. Governments can own minority stakes in companies directly, through the Treasury, or indirectly, using holding companies, development banks, or professionally managed pension funds of SOEs and sovereign wealth funds. The problem with the latter is that it is hard to figure out when investments by pension funds or sovereign wealth funds are done with political or diplomatic objectives in mind and when they are done to simply maximize returns. Think about the scandal at 1MDB, a development fund from Malaysia that invested abroad to acquire independent power generators in Egypt, Pakistan, Bangladesh, and the UAE at what many thought were over-priced values. Furthermore, some of its acquisitions were also beneficial for Malaysian business groups, raising suspicion that they benefitted entrepreneurs closely tied to the regime. However, it was hard to prove that those investments were made for political objectives, until the press found that the Fund had deviated resources to the personal bank account of Prime Minister Najib Razak and had made investments in Razak's pet projects, including art and feature film productions, etc.

There are at least three ways around these challenges. First, researchers can zoom in and focus on one or a few sectors and do detailed work with smaller samples of SOMNCs and cross-border transactions; as long as the samples cover SOMNCs from different geographies. This would allow researchers to undertake the careful work necessary to define majority- and minority-owned SOMNCs, the careful collection of data regarding cross-border transactions by these firms, and it would avoid the focus on SOMNCs from specific countries. In terms of what sectors are of interest, it would be interesting to know the differences in internationalization patterns, risk-taking profiles, and entry strategies of firms in natural resource sectors versus high-technology sectors. Given that most of the work that examines the risk-taking attitudes of SOMNCs has focused on natural resources, it would be interesting to contrast those patterns with what happens in high-technology or in higher value-added sectors.

Second, researchers can look at the changes in behavior of SOMNCs as they are privatized. This has been commonly used in the privatization literature and would provide an interesting setting to examine how the behavior of an MNC changes as the government phases out its control of the firm. The obvious drawback of this approach is that there are many selection issues with privatization data that one would have to deal with before one could make generalizable statements about the behavior of SOMNCs (i.e., governments usually privatize firms that are easy to sell to the private sector and that could be, therefore, more likely to internationalize as private firms).

Finally, there is significant work comparing the internationalization of SOMNCs with that of private MNCs (Guo, Clougherty and Duso 2011, Karolyi and Liao forthcoming, Ramasamy, Yeung and Laforet 2012). Most of those studies compare the average behavior of SOMNCs with the average behavior of heterogeneous groups of private firms (i.e., most of these studies examine cross-sectional variation using dummies for state ownership). The problem with this approach is that authors may be comparing SOMNCs with a peer group of private firms that is not comparable (because it has too many small/big firms or because it is simply too heterogeneous). Obviously, we cannot ask governments to randomly select firms in which to buy ownership stakes, so that we can study SOMNC behavior in an experimental setting. Still, researchers could take a second-best approach using state-of-the-art matching techniques to create comparable pairs of SOMNCs-MNCs (Abadie, Drukker, Herr and Imbens 2004).

Conclusions: Do SOMNCs Behave Differently than Private MNCs?

In this chapter, we have tried to illustrate some of the important changes in the governance and monitoring of SOEs that have also changed how SOMNCs operate around the world. We have also reconciled the recent perspectives on agency theory of SOEs with the puzzles that arise from the theory of SOMNCs. With this simple framework, we suggest that there is a lot of research to be done to further our knowledge of SOMNCs. There are many promising research agendas to pursue to aid our understanding of SOMNCs; later we provide four promising avenues for future research.

Political and Economic Shocks as Moderating Factors for SOMNC Internationalization

One obvious first step is to spend more time working on refining the theory of SOMNCs and their hybrid objectives. We know very little about what types of home and host country conditions would affect the behavior of SOMNCs and their internationalization strategies. In particular, it would be important to bring politics into the equation. There is an important double principal-agent conflict that we need to understand better and that is how SOMNCs and their managers respond not only to governments but to voters. Do SOMNCs in different political systems act differently? Does the ideology of the parties in power affect how SOMNCs operate? The socialist former President of Venezuela, Hugo Chavez, pursued an aggressive interventionist agenda at home and abroad. He used PDVSA, the national oil company, to create joint ventures all over Latin America and to provide subsidies in Nicaragua, Ecuador, Bolivia, Cuba and other countries. One could imagine, even outside this extreme case, that ideology and home country politics matter. For instance, we need studies

that look at how democratic transitions or big ideological shifts affect the internationalization strategies of SOMNCs.

Similarly, some countries have more political instability or power turnover than others, and there are no studies of how that political instability affects the strategies of SOMNCs. One could think that if there is more turnover in power in a country, the horizons that SOMNCs care about would shorten and many of the advantages of having a long-term, patient investor like the government as shareholder would fade away. Thus, it would be of interest to know if the risk profile of SOMNC cross-border operations and acquisitions changes.

Following the same logic, it would be interesting to see how home country economic conditions affect the actions of SOMNCs. For instance, if the soft-budget constraint of SOMNCs provides incentives for managers to be more risk-prone, how do economic shocks such as recessions or severe budget crises at home affect the internationalization of SOMNCs? How much do these conditions at home harden the budget constraint of SOMNCs?

Internationalization Patterns of SOMNCs: The Need for Global Data

In this chapter, we examined some of the challenges of working with SOMNCs data. We did not undertake this task as a way to discourage researchers from working on the topic, but as a way to guide data collection to avoid the obvious pitfalls researchers face when examining the behavior of SOMNCs and their internationalization. Building global databases of SOMNC internationalization that avoid the challenges described in this chapter would allow us to leap forward and go beyond what we know about Chinese SOMNCs. Do SOMNCs from Dubai or Brazil behave similarly to those from China? What are the most important global patterns of behavior of SOMNCs that cannot be uncovered with the data we have today?

Once we have better data we can come back and ask the basic questions that researchers in International Business would like to answer. Are SOMNCs better at expanding to risky countries? The data for we have for China shows SOMNCs as being extremely capable of navigating challenging institutional environments and willing to internationalize to more distant locations (especially culturally distant). Yet the databases that look at acquisitions worldwide point in a different direction and show SOMNCs preferring geographically close countries. Furthermore, global cross-border M&A data shows that SOMNCs do not behave much differently from private MNCs. For instance, it is not clear that SOMNCs outside China have any particular advantages in internationalizing to challenging environments.

Using global data or detailed case or industry studies, it would be good to examine the patterns of internationalization of SOMNCs. Are these firms focused on expanding to secure inputs or to secure markets? Or are they actually expanding to learn and acquire cutting-edge technologies?

The Conflicting Goals of SOMNCs: Principal-Principal Conflicts and Internationalization

Researchers can also do a lot to examine how the conflicting goals of SOMNCs and their internal principal-principal conflicts are affecting their internationalization. This would require a lot of new case studies as well as large-n studies with careful coding of state ownership. These studies would allow us to see if SOMNCs are behaving like private firms or if their conflicting objectives are actually leading them to make many unprofitable investments. We have made some inroads into studying whether SOMNCs, for instance, tend to pay more than private firms for similar deals. But we could do more to understand *under what circumstances* principal-principal conflicts in SOMNCs trigger different responses. For instance, in October of 2016 the meatpacking company JBS, a Brazilian company that acquired Pilgrim's Pride in the United States with subsidized financing from the South American government, proposed to change its headquarters to Dublin, Ireland, generating significant tax savings for shareholders. However, the Brazilian government, even though it was a minority shareholder through its investment arm BNDESPAR, decided to use its veto over corporate reorganizations to block the relocation of the firm. The company immediately lost more than 10% of value in stock markets. The media and investors wondered why a government would apparently shoot itself in the foot and block a profitable deal that hurt all shareholders.

Researchers interested in this agenda could help us understand how different shareholder configurations affect internationalization. Does having sovereign wealth funds as investors matter for internationalization? Does having quasi-state actors such as pension funds or development banks changes shareholder dynamics? In fact, there is now a large literature on blockholder conflict, that is, how coalitions of shareholders contest for power with each other. Rather than looking at shareholders individually, one could look at how different coalitions of shareholders and their contests for power limit or enable different internationalization strategies (Chen et al. 2016).

SOMNCs as Learning Organizations

Finally, going beyond the monolithic view we have of SOMNCs requires us to see them as learning organizations. We know very little of the role SOMNCs have in creating, exporting, and importing knowledge. We have only a vague idea of how SOMNCs transmit knowledge internally and how different settings affect those knowledge flows. In China, Brazil, South Korea, and India, some of the most interesting high tech firms have government majority or minority ownership. Is government ownership an advantage or disadvantage for those firms? One could think that having the government as a long-term patient investor, or having a soft-budget constraint, would help firms to focus on breakthrough innovations. Breakthrough innovations usually require long periods of gestation because they are usually the consequence of cumulative innovation that takes years to pan out

(Lazonick 2007, Pisano 2006). On the other hand, it is easy to imagine how principal-agent and principal-principal conflicts, or political instability, could deviate SOMNCs from their innovative focus by changing the horizon that managers and investors use to innovate. So far, we do not know if the long-term patient investor logic dominates over the short-term political pressures SOMNCs face when it comes to innovating and learning.

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