Strategic Management Journal
Strat. Mgmt. J., **22**: 989–998 (2001)
DOI: 10.1002/smj.204

RESEARCH NOTES AND COMMENTARIES

ORGANIZATIONAL OWNERSHIP, COMPETITIVE INTENSITY, AND FIRM PERFORMANCE: AN EMPIRICAL STUDY OF THE INDIAN MANUFACTURING SECTOR

KANNAN RAMASWAMY*
Thunderbird: The American Graduate School of International Management, Glendale, Arizona, U.S.A.

Emerging countries are using privatization as a key strategy in their drive to become free market economies. Although these ownership changes are rapidly gaining prominence, the academic literature has been equivocal about the performance benefits of private vs. state ownership. The lack of clarity in findings can be largely traced to the underspecification of the models that prior studies have examined. Specifically, prior studies have mostly ignored the central role of competitive rivalry. This paper proposes a model that centers around the interactive, inseparable effects of ownership and competitive rivalry on firm performance. Results of the empirical examination set in India show that competitive intensity moderates the relationship between ownership and performance. Copyright © 2001 John Wiley & Sons, Ltd.

Privatization is seen as the key mechanism that has the potential to transform the centrally planned emerging economies to growth-oriented market systems. This conversion from state to private ownership brings with it a wide array of challenges in the arena of strategic planning. Despite the profound strategic management implications of this wave of sweeping changes, questions relating to state vs. private ownership have received surprisingly scant attention in the strategy literature. Although a small group of studies have examined the influence of state vs. private ownership on aspects such as strategic decision processes (Papadakis, Lioukas, and Chambers, 1998; Ring and Perry, 1985), organizational structures (Tolbert, 1985), and performance consequences (Parker and Hartley, 1991), these efforts only represent the beginnings of important cross-disciplinary excursions. Concerted efforts to apply strategy concepts to understand important phenomena such as privatization have yet to emerge.

This paper attempts to bridge the gap by drawing from the strategy literature to address contemporary issues related to privatization. It explores the interactive role of ownership status and competitive rivalry in influencing performance differentials between state-owned enterprises (SOEs) and private firms. It theorizes that competitive intensity will moderate the relationship between ownership and performance. This contention is evaluated in a sample of Indian manufacturing firms representing both private and state ownership.

Key words: ownership; public sector firms; competitive intensity; privatization; India
*Correspondence to: Kannan Ramaswamy, Department of World Business, Thunderbird: The American Graduate School of International Management, 15249 North 59th Avenue, Glendale, AZ 85306, U.S.A.

Received 23 June 1999
Final revision received 10 April 2001

THE LITERATURE

A well-established stream of research in strategy and finance has examined the consequences of alternative ownership structures on organizational performance (e.g., Li and Simerly, 1998). These studies are largely built on the premise that greater stock ownership by managers (insiders) aligns managerial interests with those of the other owners (outside stockholders) thus enhancing firm performance. Therefore, with few exceptions (e.g., Parker and Hartley, 1991), most of these studies have been concerned with the insider/outsider dichotomy rather than with differences between ownership groups such as state vs. private ownership and their likely impact on performance.

State vs private ownership: performance outcome

Research on variations in owner group behavior and performance consequences has been the staple of public policy economists and public administration scholars (see Aharoni, 1986 and Vining and Boardman, 1992 for reviews). This stream of work largely supports the contention that private firms achieve superior performance outcomes compared to state owned organizations. This conclusion rests on a multiplicity of theoretical perspectives ranging from property rights and agency theory to managerial rewards and public choice (see Aharoni, 1986 for a discussion of the reasons underlying the poor performance of SOEs). The common reasons that are often cited include (i) pay differentials between SOE managers and their counterparts in the private sector, (ii) poor accountability and the lack of consequences for failure in SOEs, (iii) ownership dispersion and constraints on transfer of property rights, (iv) lack of adequate monitoring by the state, and (v) subsidization of poor SOE performance from government funds.

Despite the strong theoretical consensus favoring private ownership, the empirical evidence has been equivocal at best. A review by Vining and Boardman (1992) exemplifies this discord. In examining 54 studies that compared state and private ownership, they found that 32 concluded that private firms perform better; six found that SOEs perform better, and 16 did not report strong evidence to suggest that either form was better. The lack of indisputable evidence is a function of the theoretical choices that have driven this stream of inquiry. Given their paradigmatic leanings, public administration researchers have focussed on the rather narrow question '*Does ownership status (SOE/private) make a difference to organizational performance?*' While this question is indeed critical, it does not provide any insights into an equally important question, '*What are the conditions under which the form of ownership impacts organizational performance?*' It could be argued that addressing the second question would help reconcile the conflicting findings because it has the potential to provide a better understanding of factors such as competitive intensity that circumscribe the ownership—performance relationship.

Ownership status, competitive intensity, and organizational performance

Vickers and Yarrow observe 'the degree of product market competition and the effectiveness of regulatory policy typically have rather larger effects on performance than ownership per se' (Vickers and Yarrow, 1988 : 3). Echoing a similar position, some industrial policy scholars have suggested that merely changing ownership structure from state to private ownership will have little or no effect on organizational performance if it is not accompanied by an increase in competitive rivalry (see Grosse and Yanes, 1998; Shirley and Nellis, 1991). Limited empirical evidence from the privatization literature supports this rationale. For example, in the first large-scale study of the effects of privatization, Megginson, Nash. and Van Randenborgh (1994) found that SOEs that were privatized in noncompetitive contexts did not witness any significant improvements in return on sales. However, the improvements were rather dramatic in cases where they were privatized into competitive settings. It is plausible that the level of competition prevailing in a given setting can change the salience of the ownership—performance relationship. The relationship is likely to be stronger in intensely competitive environments than in weakly contested ones. The following discussion amplifies the theoretical rationale behind this contention.

Impact of ownership on performance in weakly contested markets

Ownership-based advantages may have very limited impact on performance outcomes for organizations operating in environments that are weakly

contested. The typical weaknesses of SOEs such as a reluctance to espouse value maximizing behaviors, inability to implement medium-term plans due to governmental control of the strategy-making function (Ring and Perry, 1985), and the handicap of having to pursue conflicting objectives, are less likely to place an SOE at a significant disadvantage compared to private firms in such settings. Weak competition might be more forgiving of the inability of SOE managers to design and implement proactive strategies. Hence, SOE performance may not be significantly inferior compared to private firms in similar situations.

Many researchers have argued that even privately owned firms do not adopt proactive strategies to enhance efficiency and profitability in regulated or weakly contested markets (Kay and Thompson, 1986; Smith and Grimm, 1987). Since the lack of competition implies that the firms evolve without the benefit of market-imposed discipline, it is believed that they develop a 'level of comfortable inefficiency' (Foster, 1992). As Grosse and Yanes suggest, even a privately owned firm that does not face effective competition would 'continue to behave like a monopoly, and management creativity would not grow strong. . .' (Grosse and Yanes, 1988: 55) implying a general reluctance of firms in low competition environments to engage in strategic positioning irrespective of ownership structure. Private monopolies and public monopolies are thought to be equally inefficient (Kay and Thompson, 1986; Vickers and Yarrow, 1988) hence ownership does not seem to bestow significant benefits on one type over another in such settings. Perhaps this could be an important reason why several comparative studies of ownership have reported no observable performance differences in weakly contested (monopolistic or duopolistic) markets (e.g., Pollitt,1995; Hjalmarsson and Veiderpass,1992).

Impact of ownership on performance in strongly contested markets

With increasing competitive rivalry, the ability to design and implement competitive strategies becomes crucial to organizational performance. Since escalating competitive intensity clearly winnows the population of firms, separating those that adapt from those that don't, the negative consequences of state ownership become quite pronounced. Intensive competition forces both state and private organizations to develop their marketing acumen, embrace changes in technology and pay closer attention to cost vs. revenue relationships. While *de rigueur* in private firms, the managements of SOEs are not quite as well equipped to handle the onslaught of competition. In most developing countries SOE managers are bureaucrats and not businessmen. Often they are either political appointees or seconded from the Civil Service (Shirley and Nellis, 1991). Therefore, many among these ranks lack financial and marketing acumen and more importantly, are afforded very little opportunity to develop such critical skills. Frequent rotation of managers and transfers of supervisory talent make it difficult to embrace a long-term orientation. Further, the administrative bodies that oversee SOE management typically tend to micromanage decisions (Ring and Perry, 1985; Shirley and Nellis, 1991) and thereby squelch any original initiative if it does not strictly conform to the parameters set forth in the policy and procedure guidelines. Thus, there is very little opportunity, if any, for top managers to develop strategy making skills that are vital for success in intensely competitive markets. For example, Wright *et al*. in their study of the economic transformation in Russia observe that the managerial cadre that evolved under state ownership 'were experienced in dealing with routine functional problems, but were often inflexible about adjustments required in a market economy' (Wright *et al*., 1988: 75). This void in their repertoire of skills can be an enormous handicap in facing the challenges of a context where competition is intense. In contrast, under private ownership, the constant focus on profits and revenues provides a fertile arena within which managers can hone their market-oriented skills that are critical for navigating their firm through the maze of heightened competition.

Taken together, it can be hypothesized that the performance 'handicap' of SOEs, while not substantial in weakly contested markets, will become quite large as competitive rivalry increases. Thus:

Hypothesis 1: The performance advantage of privately owned enterprises over state-owned enterprises will be positively related to the degree of competitive rivalry within the industry.

DATA AND METHODOLOGY

This study used a sample of large public and private sector manufacturing firms in India for hypothesis testing. The following section discusses the research setting, sample selection process, measure development and analytical procedures used.

Setting and sample

Since its independence in 1947, India has operated a mixed economy where state-run enterprises and private firms are engaged in head-to-head competition in several industries. Although other emerging nations possess some features that are similar to India, few have an economy that allows direct competition between SOEs and private firms on such a large scale, a crucial prerequisite for the purposes of this study.

The sample comprised four 2-digit industry equivalents namely industrial, commercial machinery and allied products (SIC 3500), chemicals and allied products (SIC 2800), food and kindred products (SIC2000), and metals and allied products (SIC 3300). These industries were specifically chosen because in general they were not subject to extensive regulation and where present, the nature of regulation did not discriminate between SOEs and private firms. This selection approach minimized the need for additional statistical controls for regulatory differences.[1]

Majority foreign-owned firms were excluded from the sample because there is strong evidence to suggest that they enjoy privileged access to superior resources given their multinational status and hence outperform domestic firms (see Grant, 1987). Therefore, including them would have stacked the odds against SOEs in favor of private firms. However, the sample did include some private firms that had nominal levels of foreign investment, typically averaging 10 percent or less of total paid-up capital. Diversified conglomerates were excluded because it is well known that the level and nature of diversification has an important impact on performance. This process of sample selection yielded a sample of 110 firms divided equally between SOEs and private organizations.

Data sources and measures

Data covering a 3-year period (1990-1992) were obtained from annual reports published by the Centre for Monitoring Indian Economy (CMIE). SOE data are based on source information that is compiled by the Bureau of Public Enterprises, an apex body that is responsible for reporting on SOE performance to the Indian Parliament. Data on private firms are compiled from the annual reports and balance sheets that these firms are legally bound to file with the Registrar of Companies, a federal oversight agency. Table 1 presents the means, standard deviations, and correlations for the measures that were used in the analysis.

Ownership status

Organizational ownership [OWNERSHIP] was defined as a dummy variable that was coded 0 to indicate a privately owned firm and 1 to indicate an SOE. There were no firms with hybrid ownership structures in the sample (i.e., partially owned by the government as well as private interests).

Competitive intensity

Competitive intensity (RIVALRY) was measured using the Herfindal index. Market share data were obtained from *Markets and Marketshares*, a CMIE report that provides annual market statistics on over 300 product groups in the manufacturing sector.

Performance

Defining performance yardsticks for comparing SOEs and private firms is indeed a nettlesome issue that warrants careful consideration. Several researchers have argued that the 'social' objectives of SOEs must be factored into any assessment of their performance since they are typically not set up to deliver the same financial results as their private sector counterparts. Others contend that SOEs are usually created to address market failures as evidenced in areas such as waste collection services or public utilities. In some countries, SOEs are formed as a result of government takeovers of

[1] Price controls and controls on competitive intensity (e.g., entry, exit, market domain specification) were the key regulatory aspects that were evaluated. Although these dimensions of regulatory control were absent in the sample that was chosen, it is acknowledged that if present regulation can significantly bias comparisons of performance across industries and ownership types. We are thankful to an anonymous reviewer who drew our attention to the likely influence of regulation and its potential to bias comparative findings.

Table 1. Means, standard deviations and correlations of study variables

Variable	Mean	Φ	V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9	V_{10}	V_{11}
OWNERSHIP (V_1)	—	—	1.0										
RIVALRY (V_2)	1403.10	1847.61	0.02	1.0									
$V_1 \times V_2$ (V_3)	621.20	1300.79	0.49***	0.58***	1.0								
SIZE-[Sales] (V_4)	4.70	1.30	−0.40***	0.04	−0.15	1.0							
SIZE-[Assets] (V_5)	4.09	1.56	−0.17*	0.04	0.02	0.85***	1.0						
MNE (V_6)	—	—	−0.54***	0.00	−0.26**	0.26**	0.08	1.0					
I_1 (V_7)	—	—	0.00	0.30**	0.18*	−0.01	−0.12	−0.03	1.0				
I_2 (V_8)	—	—	0.00	0.24*	0.20**	0.20*	0.21*	−0.04	0.20*	1.0			
I_3 (V_9)	—	—	0.00	−0.16*	−0.15	−0.04	−0.01	−0.14	−0.15	−0.20**	1.0		
ROI (V_{10})	0.00447	0.6634	−0.32**	−0.11	−0.30**	0.44***	0.23*	0.19*	−0.26**	0.12	−0.06	1.0	
ROS (V_{11})	−0.0027	0.4504	−0.27**	−0.09	−0.37***	0.35***	0.21*	0.15	−0.30**	0.15	−0.12	0.80***	1.0
OPEFF (V_{12})	0.745	0.3431	0.24*	0.17*	0.32***	−0.53***	−0.41***	−0.12	0.32**	−0.19*	0.05	−0.71***	−0.87***

OWNERSHIP: Dummy variable (1 if SOE, 0 if private); RIVALRY: Competitive intensity (Herfindal Index); $V_1 \times V_2$: Interaction term (OWNERSHIP × RIVALRY); SIZE [Sales]: Log (Sales); SIZE [Assets]: Log (Assets); MNE: Dummy variable (1 if minority foreign owned, 0 if wholly domestic); I_1: Dummy variable (1 if machinery and allied products, else 0); I_2: Dummy variable (1 if metal and allied products, else 0); I_3: Dummy variable (1 if processed agricultural products, else 0); ROI: Return on investment; ROS: Return on sales; OPEFF: Operating efficiency (Cost of goods sold/sales).

strategically important yet poorly performing firms in the private sector to prevent them from declaring bankruptcy or shutting down. Hence, it is argued that measuring their performance in conventional terms is not appropriate (see Martin and Parker, 1997, for an exhaustive discussion of these issues).

In addressing these concerns, this study evaluated a sample of SOEs that were largely comparable with their private sector counterparts on several key dimensions. First, the SOEs constituting the sample were not natural monopolies and hence faced varying levels of competition from private firms. Second, the SOEs chosen for study were not created through takeovers of poorly performing private sector firms. The public sector firms in the sample had always been under government ownership and hence did not encounter any change in status. Thus, they did not 'inherit' performance weaknesses. Third, the SOEs that we studied were primarily the investment vehicles that the government used to implement industrial policy such as development of backward regions, import substitution, or to encourage the growth of particular industry groups. All of them were chartered to run as profitable enterprises. Lastly, the SOEs in the chosen sample were not subject to significant price controls. In industries where price controls were adopted,[2] both SOEs and private firms were subject to the same pricing structures and hence obviated any performance adjustments with respect to SOEs for comparison purposes. Thus, the selected sample limited the potential biases that could result from the choices of performance criteria.

Performance was measured in terms of return on sales (ROS) and return on investment (ROI), two commonly used indicators of profitability that have been used in this stream of literature (Boardman and Vining, 1989; Parker and Hartley, 1991; Vining and Boardman, 1992). An indicator of operational efficiency (OPEFF) measured as a ratio of cost of goods sold (direct materials, direct labor, and manufacturing overheads) to sales was used to complement the profitability parameters.[3] This indicator provides an intermediate range of comparisons that are relatively well insulated from extraneous effects such as administered output prices and social costs, and addresses the theoretical foundations of private vs. SOE performance differentials that focus on the efficiency dimension.

Control variables

A logarithmic function of investment in fixed assets was used to control for the nonhypothesized effects of firm size (SIZE) in ROS and OPEFF models and a logarithmic function of sales was used in the ROI models. Two additional control variables were also introduced to account for the effects of foreign ownership and industry characteristics. As indicated earlier, although the sample did not include *majority* foreign owned firms, there were 25 firms that had *minority* foreign investors. Hence a dummy variable, MNE (MNE = 0 if owned only by domestic investors and 1 if minority foreign ownership was involved), was used to control for any potential performance impacts that even this token 'foreignness' might have. Industry proxies were added to control potential industry effects such as differentiability, technological intensity, seasonality, and volatility that were not hypothesized.

Analytical procedure

As a first step, a MANOVA was used to confirm the presence of performance differentials between SOEs and private firms. Since the results clearly evidenced such differences, a series of one-way ANOVAs and studentized *t*-tests were used for finer analysis. It was found that the private firms outperformed the SOEs on all three performance indicators. They had significantly higher ROI, ROS and a significantly lower OPEFF score indicating higher efficiency. These results are shown in Table 2. The hypothesized effect of competitive rivalry on the magnitude of the performance differences was tested using hierarchical regression models. The interaction term (OWNERSHIP × RIVALRY) was significant in all three models examined. The proportion of variance explained increased significantly in moving from the linear

[2] Most of the price controls were limited to industries that engaged in the manufacture and sale of primary goods and services such as petroleum, cooking gas, coal, grains, and pulses. For the most part, the sample studied here did not include firms competing in such industries.

[3] It would have been preferable to use a total factor productivity measure that takes into account all the factor inputs. However, we were unable to obtain detailed data on capital costs for SOEs and headcounts for the private firms. Hence, computing a reliable indicator of total factor productivity was not feasible. In the absence of this data, the use of an operational efficiency as defined above seemed the best alternative.

Table 2. Effect of ownership on performance: ANOVA results

Performance measure	SOE Group $N = 55$	Private group $N = 55$	F
Return on investment	−0.1672	0.2565	6.507**
Return on sales	−0.1482	0.0948	14.442***
Operating efficiency	0.8357	0.6733	7.462**

**p < 0.01; ***p < 0.0001
Operating efficiency: Cost of goods sold/sales. (Higher numbers reflect lower efficiency level).
Entries in cells indicate means for each group on the corresponding variable.

Table 3. Linear and moderated regressions of ownership, competitive intensity and performance

Variable	Return on investment		Return on sales		Operating efficiency	
	Linear	Moderated	Linear	Moderated	Linear	Moderated
OWNERSHIP	−0.223*	−0.094	−0.258**	−0.149	0.180*	0.045
RIVALRY	−0.123	−0.036	−0.115	−0.047	0.218**	0.099
SIZE	0.255**	0.260**	0.145	0.169*	−0.350***	−0.373***
MNE	−0.012	−0.014	−0.025	−0.027	0.011+	0.013
I_1	−0.050	−0.029	−0.059	−0.037	0.021	0.003*
I_2	0.067	0.113	0.098	0.135	−0.146	−0.177
I_3	−0.073	−0.090	−0.145	−0.164	0.060	0.074
OWNERSHIP × RIVALRY		−0.298**		−0.250*		0.292**
R^2	0.189	0.257	0.144	0.198	0.253	0.305
F	3.391***	4.275***	2.459**	3.047***	4.946***	5.429***
Chow's ΔF	8.858***		6.528***		72.903***	

Note: +p < 0.10* p < 0.05;** p < 0.01;*** p < 0.0001
OWNERSHIP: Dummy variable (1 if SOE, 0 if private); RIVALRY: Competitive intensity (Herfindal Index); SIZE [Sales]: Log (Sales); SIZE[Assets]: Log (Assets); MNE: Dummy variable (1 if minority foreign owned, 0 if wholly domestic); I_1: Dummy variable (1 if machinery and allied products, else 0) I_2: Dummy variable (1 if metal and allied products, else 0); I_3: Dummy variable (1 if processed agricultural products, else 0); ROI: Return on investment; ROS: Return on Sales; OPEFF: Operating efficiency (Cost of goods sold/sales).

to moderated models. Chow's incremental F-tests also showed that the addition of the interaction term increased explanatory power significantly. These regression results are shown in Table 3.

RESULTS AND DISCUSSION

The results show that (a) State-owned enterprises do not perform as well as their private sector counterparts, and that (b) the magnitude of the private vs. SOE performance differential increases with increasing competitive intensity.

The moderating effect of competitive rivalry can be better illustrated in graphical terms. Figure 1 shows the remarkable performance differentials that emerge between SOEs and private firms with increasing competitive intensity. This plot was derived using a median split approach to distinguish between low and high competitive intensity environments. Performance measured in terms of ROI was plotted for SOEs and private firms under both high and low competitive intensity situations. The end points of the two lines represent the means of the two groups on ROI. It can be seen that the lines are much closer together under low competitive intensity conditions but diverge significantly with increases in competitive intensity. This suggests that ownership is far more critical in highly competitive contexts than in weakly competitive ones, the effect that was hypothesized.[4]

Collectively, the findings suggest that although SOE performance does not compare favorably with privately owned firms in general, the differential is of a much smaller magnitude in weakly contested markets. This implies that the level of competitive

[4] Similar plots were developed using ROS and OPEFF. These plots were similar to the ROI plots.

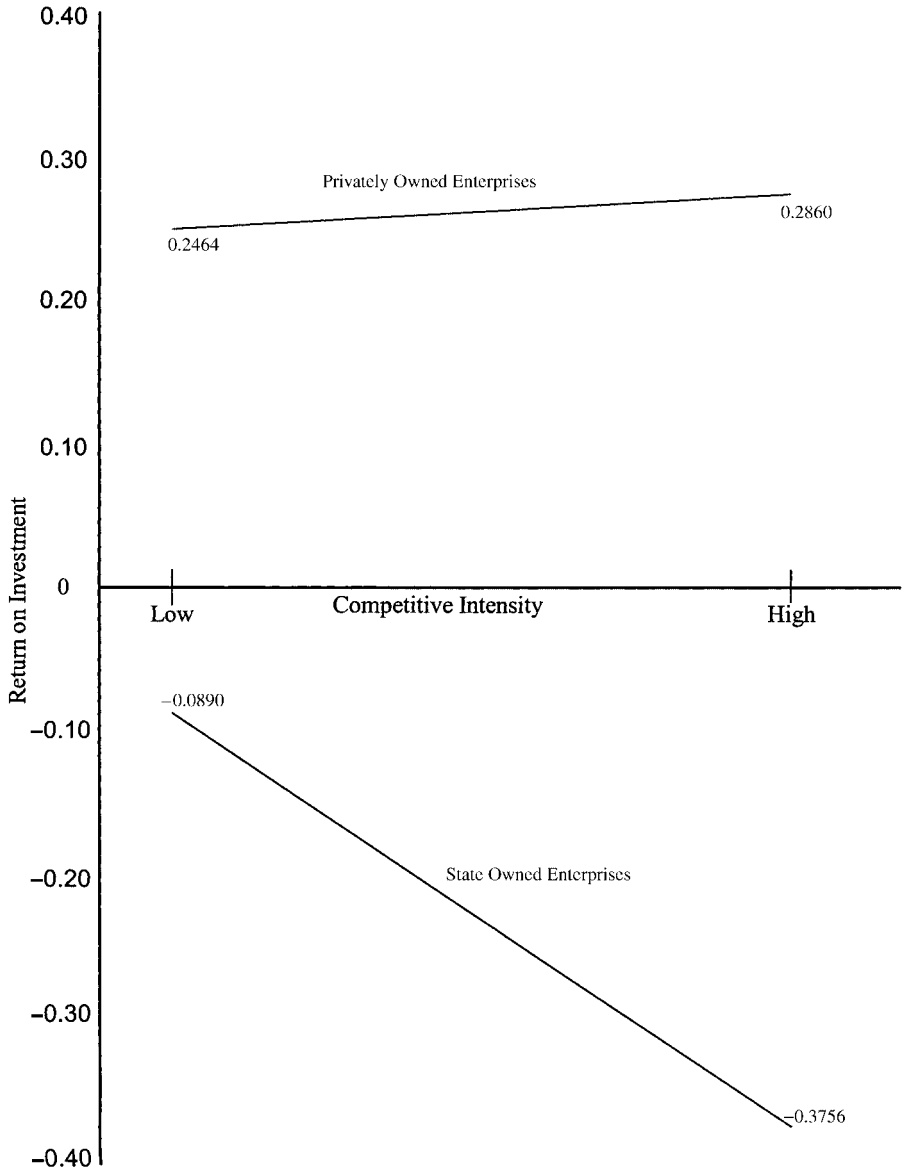

Figure 1. Moderating effect of competitive intensity

rivalry that the environment presents must temper the rallying call in favor of privatization heard across emerging economies. Ownership advantages seem to be less critical in weakly contested markets but become increasingly relevant when competition intensifies. Hence, developing countries that are seeking to revitalize their SOEs might do best to focus first on privatizing inefficient investments in sectors where SOEs face effective competition before tackling poor performing SOEs in noncontestable or weakly competitive markets. Alternatively, privatization of monopolies is more likely to succeed if it is accompanied by market reforms that allow some form of free market competition.

Some of the same logic is evident in the post-privatization records of developed countries as well. For example, in the U.K., the privatizations of the Post Office, British Aerospace, and for a considerable period of time British Airways, did not have any significant positive performance effect. It is plausible that given their competitive contexts, largely monopolistic, mere changes in ownership were insufficient to bring

about fiscal discipline and consequently better performance. However, the current wave of privatization in Western Europe, especially among European Union (EU) countries is likely to have more beneficial results. Although the firms being privatized are still largely monopolies (e.g., telecommunications), they will face effective cross-border competition upon privatization due to the renewed push towards free markets under the aegis of the European Union. While tangible competition might be absent in specific home markets, it is likely to be fairly significant within the European Union and hence have a favorable disciplining effect on the privatized entities. The same conclusion would probably hold true for countries in the region that have applied for EU membership such as the Czech Republic and Poland.

While the findings of this study offer a persuasive case for a holistic approach to understanding the performance correlates of ownership structure, a few limitations of study design must be acknowledged. Although the choice of a single country context enhances internal validity, it limits external validity and generalizability. Hence, the applicability of these findings to other settings might have to await further replications. This could be a challenging proposition largely because of the fact that there are very few countries that have significant populations of SOEs and private firms engaged in head-to-head competition. Therefore it may necessitate innovative methodological approaches that are less restrictive with respect to the sampling frame.

This study did not explore whether the specific strategy adopted by the firms had a bearing on performance in the context of an emerging economy, an issue that has been the focus of considerable debate. Some researchers argue that the notion of strategy in an SOE is largely irrelevant since the Government controls most of the strategy variables. As Shirley and Nellis observe, 'Managers of state-owned enterprises face a number of disincentives and obstacles to adopting medium-term changes in their environment through corporate plans ... their market is protected and their prices controlled ....' (1991: 21). Ring and Perry extend this line of thinking further observing 'strategic management in the public sector may be extremely difficult' (Ring and Perry, 1985: 281). and 'existing models do not capture the legitimate strategic management processes required by the differing contexts of the public sector' (Ring and Perry, 1985: 285). In light of these arguments it will be beneficial to first examine whether SOEs adopt coherent strategies and then explore the performance implications of the strategies that emerge.

REFERENCES

Aharoni Y. 1986. *The Evolution and Management of State Owned Enterprises*. Ballinger Publishing. Cambridge, MA.

Boardman AE, Vining AR. 1989. Ownership and performance in competitive environments. *Journal of Law and Economics* **32**: 1–33.

Foster CD. 1992. *Privatization, Public Ownership and the Regulation of Natural Monopoly*. Blackwell: Oxford, U.K.

Grant RM. 1987. Multinationality and performance among British manufacturing companies. *Journal of International Business Studies* **18**: 79–89.

Grosse R, Yanes J. 1998. Carrying out a successful privatization: the YPF case. *Academy of Management Executive* **12**: 64–73.

Hjalmarsson L, Veiderpass A. 1992. Productivity in Swedish electricity retail distribution. *Scandinavian Journal of Economics*, Special Issue: 193–206.

Kay JA, Thompson DJ. 1986. Privatisation: a policy in search of a rationale. *Economic Journal* **96**: 18–32.

Li M, Simerly RL. 1998. The moderating effect of environmental dynamism on the ownership and performance relationship. *Strategic Management Journal* **19**(2): 169–179.

Martin S, Parker D. 1997. *The Impact of Privatisation*. Routledge: London.

Megginson WL, Nash RC, Van Randenborgh M. 1994. The financial and operating performance of newly privatized firms: An international empirical analysis. *Journal of Finance* **69**: 403–452.

Papadakis VM, Lioukas S, Chambers D. 1998. Strategic decision-making processes: the role of management and context. *Strategic Management Journal* **19**(1): 115–148.

Parker D, Hartley K. 1991. Do changes in organizational status affect financial performance? *Strategic Management Journal* **12**(8): 631–641.

Pollitt MG. 1995. *Ownership and Performance in Electric Utilities: International Evidence on Privatization and Efficiency*. Oxford University Press: Oxford, U.K.

Ring PS, Perry JL. 1985. Strategic management in public and private organizations: implications of distinctive contexts and constraints. *Academy of Management Review* **10**: 276–286.

Shirley M, Nellis J. 1991. *Public Enterprise Reform: The Lessons of Experience*. The World Bank: Washington, D.C.

Smith KG, Grimm CM. 1987. Environmental variation, strategic change and firm performance: a study of railroad deregulation. *Strategic Management Journal* **8**(4): 363–376.

Tolbert PS. 1985. Resource dependence and institutional environments: sources of administrative structure in institutions of higher education. *Administrative Science Quarterly* **30**: 1–13.

Vickers J, Yarrow G. 1988. *Privatization: An Economic Analysis*. MIT Press: Cambridge, MA.

Vining A, Boardman A. 1992. Ownership versus competition: efficiency in public enterprise. *Public Choice* **73**: 205–239.

Wright M, Hoskisson RE, Filatotchev I, Buck T. 1998. Revitalizing privatized Russian enterprises. *Academy of Management Executive* **12**: 75–85.