



**DEVELOPING INTERNATIONAL FIRM CAPABILITIES:
GLOBALISATION STRATEGIES OF SINGAPORE'S
GOVERNMENT-LINKED CORPORATIONS**

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ABSTRACT

Neither the strategic management nor HRM literatures yet satisfactorily explain how domestic firms newly venturing into foreign investment develop international capabilities after the initial choice of entry mode. This paper contends that a vital contextual aspect of the development of international capabilities are systems of corporate control. Using Singapore's public enterprise sector as a case study, the paper explores whether the simulated market for corporate control under 'Singapore Incorporated' works when competitive public enterprises expand internationally and if it can be judged to be effective. The paper concludes that effective systems of corporate control are essential to the development of international capabilities and demonstrates the importance of linking corporate and business strategy on the one hand and HRM practices on the other to capability development.

INTRODUCTION

Neither the strategic management nor the HRM literatures yet satisfactorily explain how domestic firms newly venturing into foreign investment develop international capabilities after the initial choice of entry mode. While the strategic management literature has recognised that resource mobilisation is vital to the development of capabilities (Eisenhardt and Martin 2000; Teece, Pisano and Shuen 1997), it has been accepted on the basis of casual empiricism that capability development requires the embedding of tacit knowledge in firm-specific routines (c.f. Nelson and Winter 1982). This implies a circularity: development of capabilities depends on the capability to create routines that nurture resources into capabilities. Even more circular are recent contentions that firms require dynamic capabilities, which is to say the capability to manage capabilities (Teece, Pisano and Shuen 1997). Similarly, the HRM literature recognises that HRM practices need to be aligned and integrated with firm strategies (Huselid 1995; Ichniowski, Shaw and Prensushi 1997; Jackson and Schuler 1995), but does not explain how HRM routines and specific HRM capabilities can in practice be bundled to create and institutionalise managerial capabilities as a basis for competitive advantage. This shortcoming is of particular consequence in the case of international operations and especially new ventures.

This paper contends that a vital contextual aspect of the development of international capabilities are systems of corporate control. Corporate control is a component of governance, but is focused on specific aspects of firm performance. Corporate control refers to incentives and sanctions, both internal and external, that regulate the quality of managerial decision-making in formulating and implementing corporate and business strategies. The term 'corporate control' is used throughout the paper in preference to 'governance', which incorporates broader issues surrounding firm strategy (e.g. vertical integration). On the whole it can be assumed that there is a market for corporate control, such that corporations that undertake ill-conceived international ventures, for example, will in the first instance be punished by the stock market (Alchian 1965; Coffee 1986; Madden 1981; Manne 1965). If boards do not respond by revising strategies and, if necessary, by restructuring management, the corporation will become vulnerable to takeover: "existence of this perceived threat of takeover in turn acts as an incentive mechanism that deters management from the pursuit of policies that are substantially at variance with the interests of its shareholders" (Vickers and Yarrow 1988: 16). Firms therefore seek to put in place systems that will avoid these ultimate sanctions. The corollary is that markets for corporate control should promote the development of resources and capabilities to promote competitive advantage and profitability. Firms or subsidiaries not subject to effective markets for corporate control have little incentive to either create valuable, rare, inimitable, and non-substitutable resource or transform these resources into competitive capabilities.

Despite a rapidly growing literature exploring internationalisation strategies and corporate governance (Bjorkman, Barner-Rasmussen, and Li 2004; Doz and Prahalad 1981, 1984; Rodrigues 1995), the link between strategy, HRM, and corporate control is still poorly understood in theory and practice. There is little understanding of the processes required for capability development (Eisenhardt and Martin 2000) or how these can be transferred or renewed throughout a multi-national corporation.

A difficult problem is sometimes elucidated by a very different perspective. Insight into the link between strategy and HRM may be gained from studying firms venturing into international markets with non-standard systems of corporate control. Singapore's public enterprise sector provides such a case study. Singapore is the epitome of state-managed socio-economic development, characterised by the state taking a leading commercial role through massive financial and human capital investment in public enterprises known as government-linked corporations (GLCs). Since independence in 1965, the ruling People's Action Party (PAP) government has used GLCs to facilitate economic, political, and social transformation. GLCs have dominated the Singapore economy and been instrumental to socio-economic development and regime stability (Low 1991, 2002ab; Low and Johnston 2001; Vennewald

1994; Worthington 2004). Yet despite their "immensely important social and economic role" there has been "little empirical work...conducted on GLCs" (Rodan 2001: xi). While GLCs have been partly privatised by disposal of minority shareholdings, they are still only weakly subject to market discipline. The government retains majority shareholdings in what it regards as strategic GLCs and it does not allow these firms to be taken-over or to fall into bankruptcy.

As in another non-standard case of Japanese business groups (keiretsu), the Singapore government therefore tries to simulate a market for corporate control to monitor and manage the financial and strategic performance of GLCs (Aoki and Dore 1994; Sheard 1996). However, in contrast to the much discussed Japanese keiretsu, the system of state-corporate control in Singapore is more direct and deliberate and does seem to have worked after a fashion. Through the State's commercial investment firm, Temasek Holdings, the government appoints company boards and chairmen, influences senior and executive management, and rewards and sanctions managerial performance. Temasek Holdings manages over \$90b of state funds (Temasek Review 2004) and has made substantial cross-appointments of bureaucrats to GLC boards to monitor performance and secure state interests (Vannewald 1994; Worthington 2004).

Since 1994 the PAP government has implemented an internationalisation policy aimed at promoting global expansion of GLCs. The number of GLCs venturing abroad and the scope of their international operations expanded dramatically. By 2004 nearly half of Temasek Holdings' investment portfolio was concentrated in foreign firms. This represented an extraordinarily rapid internationalisation for Singapore's entire commercial public enterprise sector. Thus only recently have Temasek and its subsidiary GLCs been confronted by the imperative to develop clearly defined processes and practices to create and institutionalise the international capabilities required for multi-national competition. While the literature abounds in cases of individual firms and industries venturing offshore, the Singapore case of a whole corporate sector doing so in a systematic way and within a strict timeframe is probably unique.

The case of Singapore's public enterprise sector is interesting precisely because it is a limiting example in which key variables are easily identified at both the state and firm levels: authority and decision making in Singapore are unambiguous, there is little corruption, the government has a clear and demonstrated interest in corporate control and internationalisation of public enterprise, and there has been a dramatic shift toward outward FDI within the last decade. Singapore is a limiting case, but one that has been highly successful and can serve as a model for transitional economies that continue to utilise state-owned enterprises on a large-scale, such as China and Russia (c.f. Aivazian, Ying, and Qiu 2005).

The simulated market for corporate control and the PAP's policy to dramatically expand GLC internationalisation are what make 'Singapore Incorporated' (Singapore Inc.) a unique model for exploring the process by which firms develop international capabilities. The questions at issue here are how this model of corporate control works when GLCs expand internationally and whether or not it can be judged to be effective. Of necessity the paper is more descriptive than analytical: the governance of GLCs is still politically sensitive and only very limited access was gained to top managers and directors. Nevertheless, so far no-one else has been able to do any better.

The paper is organised in three sections. Section one provides a brief literature review of the strategy and dynamic capability literature. Section two explains the origins, rationale, and extent of GLC internationalisation. The third section explores the process by which the Government of Singapore and its vehicle Temasek Holdings have sought to develop the international capabilities of GLC's to sustain global competitiveness.

(i) LITERATURE REVIEW

As Regner (2001: 44) argues, strategy is “an incremental, complex, but purposeful process” that involves the mobilisation, allocation and renewal of resources (Mintzberg and Waters 1985; Quinn 1980). It involves the identification of long-term objectives and the development of detailed plans that mobilise resources and capabilities to meet those objectives (c.f. Chandler 1962) through the dynamic alignment of resources and capabilities (Teece 1990; Teece, Pisano and Shuen 1994) with environmental conditions (Andrews 1971). Strategy is an adaptive process that becomes increasingly difficult as environmental complexity intensifies (McCann and Selsky 1984; Mintzberg 1978, 1990, 1994).

Firms’ international strategies concern two interdependent decisions: location and the organisational form of foreign operations. The former has been widely explained through location and comparative advantage theories (c.f. Dunning 1970). The latter presents a more challenging and contentious issue. Two theoretical frameworks have generally been used to explain the organisational form of foreign operations: transaction costs and resource-based views. The transaction cost approach posits that imperfections in market exchange cause firms to internalise transactions. Organisational forms of foreign operations will subsequently be determined by the extent to which internalised operations provide cost advantages vis-à-vis intermediate contracting (Buckley and Casson 1976; Casson 1979; Rugman 1981; Williamson 1975) – for example, franchising versus wholly owned subsidiaries. While providing a plausible and insightful framework for explaining forms of firm internationalisation, the transaction cost approach is static (Buckley 1990; Madhok 1997; Teece 1985) and fails to explain the dynamic process by which firms acquire and develop the capabilities to both compete in international markets and manage multi-national operations. As Calof and Beamish (1995: 115) note, “little empirical research has examined the dynamics of internationalisation”. Similarly, Anderson (1997: 29-38) observes that “most research...has, however, been static in nature” when exploring firm internationalisation.

The resource-based view of strategy provides a more dynamic framework for exploring how a firm develops international competitive capabilities. The resource-based view focuses on the mobilisation and organisation of resources to develop firm capabilities. Resources are both the tangible and intangible assets owned or controlled by an organisation that enable it to formulate and implement value enhancing strategies (Amit and Schoemaker 1993; Barney 1986, 1991; Peteraf 1993; Rumelt 1984; Wernerfelt 1984). They are finite in supply, depreciate over time, and diminish in value when shared with other parties. Resource heterogeneity, rather than industry structure, fundamentally determines whether a firm will be able to sustain its competitive advantage. According to the resource-based view, the historical process by which resources are developed, renewed, and utilised within the firm is important to understanding how firm-specific capabilities are created (Eisenhardt and Martin 2000).

Capability theorists argue that value appropriation (sustainable competitive advantage), distribution (shareholder wealth), and creation depend on building and exploiting idiosyncratic capabilities (Dosi, Nelson and Winter 2000). Sanchez (2001: 153) defines capabilities as “repeatable patterns of action in the use of assets to create, produce and/or offer products to a market.” Capabilities are dynamic, non-finite processes that facilitate the accumulation, development, and deployment of rent yielding resources (Amit and Schoemaker 1993; Dierickx and Cool 1989; Teece, Pisano and Shuen 1997). They are invisible, knowledge based phenomena (Itami 1987; Stalk, Evans and Shulman 1992) that expand with use over time, appreciate in value when they are shared among stakeholders (Lado, Boyd and Hanlon 1997; Pucik 1988), and are path dependent. As Teece and Pisano (1994: 72) argue,

“the competitive advantage of firms stem from dynamic capabilities rooted in high performance routines operating inside a firm...and constituted by history.”

The resource and capabilities view of strategy has provided valuable insights to the process of strategy formulation and implementation. However, the processes by which firms nurture resources into capabilities remain obscure. The necessity for firms to develop routines that nurture valuable, rare, inimitable, and non-substitutable resources into capabilities indicates that knowledge of how to initiate and leverage this process is vital to creating dynamic capabilities and sustaining competitive advantage (Dierickx and Cool 1989; Eisenhardt and Martin 2000; Gupta and Govindarajan 2000; Lippman and Rumelt 1982). The vast literature on firm knowledge indicates two key factors relevant to capability development. First, knowledge resides in, and is exercised through, the human capital of the firm. Second, knowledge is typically difficult to replicate and transfer because of its tacit nature (Lippman and Rumelt 1982, Polanyi 1966; Zander and Kogut 1995) or barriers within the firm (Levinthal and March 1993; Szulanski 1996).

This paper proposes that the development of firm international capabilities is dependent on HRM practices that institutionalise international managerial knowledge, skills, and abilities within the firm at the senior and executive management level. The focus on internal resources as a source of competitive advantage (Hitt, Bierman, Shimizu and Kochar 2001) has led to increasing convergence between strategy and HRM (Snell, Shadour and Wright 2001). Analysing HRM practices is therefore necessary to understanding the processes behind resource mobilisation, renewal, and redeployment and hence international capability development. As Wright, Dunford and Snell (2001: 711-2) argue:

To deeply understand the competency [of an organisation] one must examine (in addition to the systems and processes that underlie them) the people who engage in the process, the skills they individually and collectively must possess, and the behaviour they must engage in (individually and interactively) to implement the process. In addition, to understand how such a competency can be developed or maintained requires at least in part examining the people management systems that ensure that the competency remains as specific employees leave and new employees must be brought in to replace them. This again exemplifies the interaction of people and processes as they comprise competencies.

The resource-based view provides the theoretical rationale for integrating and aligning HRM practices with strategy (Cappelli and Singh 1992). Strategic HRM endeavours to integrate and align HRM practices with an organisation's strategy to create value (Arthur 1994; Huselid 1995; Ichniowski, Shaw and Prensushi 1997; Jackson and Schuler 1995; MacDuffie 1995; Milgrom and Roberts 1995; Pfeffer 1994). Miller (1987: 352) defines strategic HRM as “those decisions and actions which concern the management of employees at all levels in the business and which are related to the implementation of strategies directed towards creating and sustaining competitive advantage”. Similarly, Begin (1991: 7) suggests that strategic HRM includes the adaptation of the HRM function “to the long-term strategies of the organisation, ensuring that selection, appraisal, rewards, and development policies are appropriate for whatever those strategies might be.”

Human resources may be seen as an organisation's core competence and HRM practices are thus crucial to organisational success (Becker and Huselid 1998). Strategy implementation therefore demands close co-ordination between internal HRM functions (e.g. recruiting, selection, training, performance appraisal) and those functions external to HRM departments (Cook and Ferris 1986) to achieve integration and alignment of HRM practices with the overall objectives and functional

requirements of the firm (Fombrun, Tichy and Devanna 1984; Kochan, McKersie and Cappelli 1984; Miles and Snow 1984; Tichy, Fombrun and Devanna 1982). Advocates of strategic HRM argue that it has a positive effect on organisational performance (Martell and Carroll 1995), allows an organisation to employ its human resource more effectively, promotes operational efficiency, encourages creativity and innovation (MacDuffie 1995), assists in addressing environmental change (Cook and Ferris 1986; Tichy and Barnett 1985) and ultimately contributes to a sustained competitive advantage (Lado and Wilson 1994; Snell, Youndt and Wright 1996; Wright, McMahan and McWilliams 1994).

The resource-based view of strategy and HRM suggests that systems of corporate control are a vital contextual aspect of the development of international capabilities. Firms subject to market discipline face market pressures to manage their resources and capabilities efficiently in order to maximise profits and avoid takeover. Market pressures mean that managers need to create and renew competitive capabilities. In the absence of market discipline for corporate control there is little incentive for firms to devise managerial HRM practices that promote resource and capability renewal. Thus a key issue is whether firms can simulate markets for corporate control to promote capability development.

(ii) INTERNATIONALISATION OF SINGAPORE'S GLCs

The future of Singapore Inc. requires internationally competitive and profitable public enterprises that will overcome the constraints of a small domestic economy. According to the neo-classical paradigm, these characteristics are not supposed to be found within public enterprises, which are depicted as inefficient firms that are a drain on public finances and a drag on competitive markets. State-owned enterprises have been the subject of extensive academic and public policy debate (Bhaskar 1992; Campos and Esfahani 1996; Cook and Kirkpatrick 1988, 1995; Dunleavy 1986; Shirley 1997). The post World War II consensus that state-owned enterprises had a viable economic and social role was discredited by the triumph in the mid-1980s of neo-liberal public policy prescriptions (De Walle 1989). The dominance of free market ideology underscored a shift from social welfare to economic rationales for state-owned enterprises; a shift supported by widespread theoretical conceptions and empirical conclusions that "public enterprises around the world have proved to be highly inefficient, primarily because they pursue strategies, such as excess employment, that satisfy the political objectives of politicians who control them" (Boycko, Shleifer, and Vishny 1996: 309). This reasoning has been grounded on property rights conceptions of corporate control that refute the economic viability of non-transferable ownership in public enterprises on the basis that "it inhibits the capitalisation of future consequences into current transfer prices and reduces owners' incentives to monitor managerial behaviour" (De Alessi 1980: 28).

While the empirical evidence supports neo-liberal contentions that state-owned enterprises perform poorly when fulfilling ideological objectives or consolidating political power (Coburn and Wortzel 1986; Yeh and Lewis 2004), there is no inherent reason why state-owned enterprises should be less competitive than private firms. Well managed state-owned enterprises should be just as likely to generate economic value and competitive advantage as private firms (World Bank 1983: 50; 1995). Singapore's GLCs support this contention as the PAP government has historically managed their performance well. As Prime Minister Lee Hsien Loong recently observed, "We have every intention of ensuring that GLCs are as well run, entrepreneurial and profitable as private companies. This is the way to build an efficient and vibrant economy" (PDS 28 August 2002: col.1046).

Since the mid-1980s recession the PAP government has increasingly focused on Singapore's long-term international competitiveness. The PAP government has promoted outward FDI to enhance Singapore's long-term competitiveness. Outward FDI mitigates structural limitations in the economy by

expanding Singapore's industrial, product, and geographic markets and encourages domestic firms to capitalise on regional market demands or lower factor input costs. Until 1994, the international exposure of GLCs was limited to a handful of conglomerates. Compared to OECD levels (relative to GDP), Singapore-based FDI was insignificant in total, heavily concentrated in adjacent Malaysia, and centred in the manufacturing and financial services sectors (Table 1, see also Rodan 1997: 164).

Table 1: Investment Abroad (1994)

Country	Investment (S\$b)
Malaysia	8.1
Hong Kong	6.5
Dutch Antilles	2.9
United States	2.7
New Zealand	2.2
United Kingdom	1.8
China	1.7
Indonesia	1.3
Australia	1.3
Holland	1.1

Source: ST (21 May, 1996).

To promote outward FDI, in 1993 the government created a fourteen member Committee to Promote Enterprise Overseas. The Committee was responsible for advising the PAP government on methods to encourage the international expansion of Singaporean firms. Based on the Committee's recommendations, in 1994 the PAP government introduced a regionalisation strategy with two distinct objectives: to facilitate outward FDI by Singaporean enterprises and to transform Singapore into a regional headquarters for foreign and local multi-national corporations operating in Asia (Perry and Yeoh 2000; Wong and Ng 1997; Yeung 1998). The regionalisation strategy thus sought to consolidate Singapore's comparative advantages in South East Asia, to attract high value-added industries to Singapore, and to develop the international competitiveness of Singaporean firms. As former Prime Minister Goh (1993: 1) stated, the regionalisation strategy "is part of our long-term strategy to stay ahead...to make our national economy bigger, our companies stronger and some of them multinational." To support the regionalisation strategy the Government announced that it would invest 2-3% of Singapore's financial reserves (approx. US\$20m) annually in overseas infrastructure projects to facilitate the regionalisation of Singaporean firms, so that by accumulation over fifteen years around one third of the nation's reserves would be held in this form (Kwok 1996).

In line with the regionalisation strategy, GLCs began to expand rapidly into the surrounding region. The usual entry mode was either joint-venture – whether between GLCs themselves or with foreign partners – or wholly-owned subsidiaries. A key example of initial GLC internationalisation was the Singapore-Johor-Riau Growth Triangle. The Growth Triangle involved the development of regional industrial parks by GLCs, which would use their existing resources and complementary capabilities. GLCs with capabilities in infrastructure development (e.g. Jurong Environmental Engineering) would work in partnership with GLCs possessing capabilities in managing industrial parks (e.g. Singapore Technologies Industrial Corporation). Local partners were used to provide ancillary services, but the majority of projects under the Growth Triangle Initiative were conducted either through wholly-owned GLC subsidiaries or GLC joint-ventures. Both the geographic and market proximity of the Growth Triangle meant that GLCs could essentially export existing resources and capabilities.

As the regionalisation strategy progressed the number of GLCs venturing abroad and the scope of their international operations expanded dramatically. By 2004 nearly half of Temasek Holdings' investment portfolio was concentrated in foreign firms (see Table 2). This represented an extraordinarily rapid internationalisation for Singapore's entire commercial public enterprise sector. Table 3 gives some insight into the nature and composition of main international ventures for several leading GLCs as of

2001 – the list would be much longer for more recent years. The vast majority of these international operations were joint ventures. This choice was attributable to GLC desired financial and strategic risk sharing, limited local market knowledge, and potential for capitalising on complementary competitive capabilities between firms.

Table 2: Temasek Holdings Portfolio Distribution as at 31 March 2004

Industry	%	Region	%
Telecom. and Media	36	Singapore	52
Financial Services	21	Australia	17
Transport and Logistics	14	ASEAN	9
Infrast., Eng., and Techn.	10	USA	7
Energy and Resources	7	Europe	7
Property	6	China, Taiwan, Korea	6
Other	6	Japan	1
TOTAL	100	India and Pakistan	1
		TOTAL	100

Source: Temasek Review (2004: 5).

Table 3: Main Foreign Ventures of Leading Singapore GLCs (2001)

GLC/Subsidiary	Economy	Sector	% Held by GLC
DBS Holdings:			
DBS Bank Philippines	Philippines	Financial Services	60
DBS Thai Danu Bank	Thailand	Financial Services	51
Keppel Group:			
AMFELS	USA	Offshore Oil Services	100
Caspian Shipyard	Azerbaijan	Offshore Oil Services	75
Keppel FELS Energy	Philippines	Power Generator	59
Keppel Philippines	Philippines	Financial Services	25
NOL:			
APL Limited	USA	Shipping & Logistics	100
PSA Corporation:			
PSA Sines Terminal	Portugal	Port Operations	100
Sealion Fuzhou	China	Investment & Port	85
Singapore Dalian Port	China	Investment & Port	70.6
Singapore Portuali Italy	Italy	Port Operations	60
Yemen Investment and Development	Yemen	Port Operations	60
PSA Muara Terminal	Brunei	Port Operations	60
PSA SICAL Terminal	India	Port Operations	57.5
Hessenatie & Noord Natie	Belgium	Port Operations	51
SembCorp:			
PT Indo-Precast	Indonesia	Building Products	100
WuxiSinlian	China	Building Products	85
SembCorp Infrastructure	India	Construction	80
Myanmar ST Food	Myanmar	Food Products	75
Dilmun Navigation	UK	Shipping	74.6
Plexis Services	USA	Freight Forwarding	74.6
Shanghai ST Food	China	Food Products	72
Singapore Airlines:			
Virgin Atlantic	UK	Airline	49
Beijing Airport Inflight Kitchen	China	Food services	40
Air New Zealand	New Zealand	Airline	25
SingTel:			
Optus	Australia	Telecom	100
PT Bukaka	Indonesia	Telecom	40
New Century InfoComm	Taiwan	Telecom	24
Globe Telecom	Philippines	Telecom	37
AIS	Thailand	Telecom	21
Bharti Telecom	India	Telecom	27
Belgacom	Belgium	Telecom	12.1

Source: USA Embassy Singap

Thus only recently have Temasek and its subsidiary GLCs been confronted by the imperative to develop clearly defined processes and practices to create and institutionalise the international capabilities required for multi-national competition. As might be expected, these ventures have involved experimentation, miscalculation, and mismanagement at both the operational and strategic levels. GLC international ventures have been politically and financially controversial. Within Singapore there has been debate over the financial viability of international ventures, most notably the costly debacle of the politically-motivated Suzhou Industrial Park in China. The project was politically fraught and led to large GLC financial losses. Political controversies also surrounded SingTel's proposed purchase of Hong Kong's Cable and Wireless and Singapore Airlines' short-lived and costly involvement in Air New Zealand. Despite the release of the Temasek Charter in 2002, which sought to clarify the commercial role of the state, the approach to managing and internationalising GLCs is still evolving in light of experience (IFER 2002).

The initial phase of GLC internationalisation through regionalisation was underpinned by three processes: vertical integration, rationalisation, and improved market access to productive resources. These processes have been essential to the development of GLC international capabilities and were largely driven by Temasek Holdings.

GLCs have become more vertically integrated in both their domestic and international operations. The logic behind this shift is to develop complementary resources and capabilities between both strategic business units and GLCs. Larger GLCs such as Keppel Corporation and SembCorp Industries have used vertical integration to develop integrated services to customers and to reap advantages derived from economies of scale. Vertical integration has also allowed GLCs to concentrate resource development, particularly human capital, and to develop new resources that support core capabilities.

Rationalisation has allowed GLCs to focus on developing core capabilities and maximising economies of scale. This strategy led to significant mergers involving GLCs in 1998 (e.g. SembCorp and Singapore Technologies; Keppel Bank and Tat Lee Bank; DBS Bank and Post Office Savings Bank) and 2000 (e.g. DBS Land and Pidemco Land; ST Automotives, ST Shipbuilding and ST Electronics) and to GLC restructuring (e.g. Keppel Corporation in 2000). The specific intention of these mergers and restructures was to transform GLCs into multi-national corporations. As the Managing Director of Temasek Holdings, Ho Ching, commented:

The intent in these mergers is not scale for dominance in the local market – it is to both skill up and scale up to compete as an effective international player, with the critical mass to develop new products and services across a selected range of property-related capability (ST 18 July 2002).

Market access to productive resources has been a further reason for international ventures by GLCs, particularly those bound by regulatory constraints (e.g. Singapore Airlines and SingTel – SingTel has spent nearly \$20b under CEO Lee Hsien Yang on geographic diversification with the intent of raising corporate revenue attributable to foreign ventures from 27% to 50%). Regulatory constraints have meant that GLCs acquired equity stakes in foreign firms without necessarily gaining strategic control (e.g. Singapore Airlines in Air New Zealand) and arguably at above-market prices (e.g. Optus Australia). Access to productive resources has also been a key concern for GLCs operating in capital-intensive industries (e.g. shipbuilding and repair). Both factors suggest a logic to GLC international

ventures being either joint venture or wholly owned: GLCs often lacked the capabilities on their own to profitably set up and manage international 'greenfields' foreign investments.

These three processes underpinning GLC internationalisation indicate that Temasek Holdings has needed to develop a system of corporate control that encourages senior and executive managers to venture GLC risk capital internationally and then adequately monitor international performance (e.g. by appointing Prime Minister Lee Hsien Loong's wife to chair Temasek Holdings or former minister David Lim to Neptune Orient Lines). While GLC international strategies have been formulated in partnership with Temasek Holdings, the key concern of this paper is whether the simulated market for corporate control under Temasek Holdings has been effective in creating international capabilities.

(iii) CORPORATE CONTROL IN SINGAPORE INC. AND THE DEVELOPMENT OF GLC INTERNATIONAL CAPABILITIES

While the literature abounds in cases of individual firms and industries venturing offshore, the case of a whole corporate sector doing so in a systematic way is probably unique. The PAP government has used the state holding company, Temasek Holdings, to encourage GLCs to expand internationally through new governance structures and performance measures. Temasek Holdings is the principal organisation responsible for managing the long-term, direct commercial investments of the state of Singapore (see Table 4). This responsibility has involved an evolutionary approach to GLC management that has increasingly concentrated on developing GLCs as multi-national corporations. Temasek Holdings has become "an active investor and shareholder" (Temasek Review 2004: 11). Temasek Holdings has clearly been instrumental to the trend of GLC vertical integration and rationalisation of production in order to encourage GLCs to develop internationally competitive capabilities.

Temasek Holdings presently acts as an institutional shareholder that seeks to maximise shareholder value by exercising its equity rights. Its emphasis on being a proactive institutional shareholder indicates that its focus is on GLC financial performance, corporate governance, and strategic competence. This role has been articulated by the Managing Director of Temasek Holdings:

Temasek holds and manages its investments for the long-term benefit of Singapore, as distinct from the Singapore government per se. To use a corporate analogy, we could regard the government of the day as a shareholder representative, which is chosen at every election. The ultimate shareholders of Temasek are the past, present and future generations of Singapore...In other words, we have a responsibility to preserve and create value not just for the present generation but also the future generations of Singapore...Throughout, Temasek acted very much as a commercial entity, investing as well as divesting our stakes in companies, where it made commercial sense...In short, we believe in finding the best people to lead, and in getting ourselves out of the way of honest, capable and competent people.

Table 4: Temasek Holdings Major Investments and Percentage of Total Ownership (as at 1 October 2004)

Telecom. and Media		Financial Services		Property	
	%		%		%
MediaCorp	100	Bank Danamon	53	Mapletree Investments	100
ST Telemedia	100	DBS	28	CapitaLand	61
SingTel	65	Bank International	28	Ascott Group	42
Telekom Malaysia	5	Hana Bank	10	Raffles Holdings	36
		ICICI Bank	9	Keppel Land	17
Transport and Logistics		Energy and Resources		Infrastructure, Engineering and Technology	
	%		%		%
PSA	100	Singapore Power	100	Singapore Tech.	100
Neptune Orient Lines	68	Tuas Power	100	ST Assembly	66
SMRT Corp.	62	Senoko Power	100	Chart.'d Semiconductor	60
Singapore Airlines	57	Power Seraya	100	ST Engineering	55
SembCorp Logistics	31	SembCorp Utilities	51	Keppel Corp.	32
				Keppel Offshore	32
				SembCorp Marine	32

Source: Temasek Review (2004: 4).

The venture capital and portfolio management role of Temasek Holdings involves several aspects: closer monitoring of GLC diversification strategies; improved standards of performance and accountability benchmarks (e.g. EVA measures); on-going divestment of non-core assets; attraction of foreign talent to GLC boards and executive management (e.g. prominent Australian director Charles Goode to the board of Singapore Airlines); increased investment in companies that can compete in global markets, and; the development of Singaporean multi-national corporations.

Since the 1984-85 recession Temasek Holdings has been highly profitable, averaging yearly profits of \$1.6b between 1988-98 (PDS January 1998) and making substantial contributions to received government revenues (see Table 5). According to the recent Temasek Annual Review (2004), Temasek Holdings achieved total averaged shareholder returns of 18% over the last thirty years and 3% over the last ten years. There are several reasons for this apparently alarming slump in returns. First, GLCs were subject to a higher cost of capital. In the past they had been able to deploy cheap risk capital from the nation's financial reserves, giving rise to problems of moral hazard and some political controversy. Under the new style of management, they were expected to finance expansion from retained earnings and debt. Second, returns were depressed by external market factors, most notably the Asian Financial Crisis of 1997-98 followed by Singapore's recession of 2001-03. The third factor was of course the rapid shift of Temasek Holdings' portfolio to foreign ventures that could not be expected to be immediately profitable. By contrast, over the more recent period 2001-03, Temasek Holdings has reported solid growth in overall revenue and gross profits (see Table 6).

Table 5: Temasek Holdings Contribution to Government Revenue (1988-2000)

	88	89	90	91	92	93	94	95	96	97	98	99	00
Temasek Holdings													
Dividends ^A	202	51	52	51	88	42	41	2	3	30	35	392	2
Inv. Revenue ^B	1.8	0.4	0.3	0.3	0.6	0.2	0.2	7.5	11.2	0.1	0.1	1.6	5.7
Net Inv. Inc. ^C	35	3	2	n.a.	10	2	2	80	120	1	1	10	32

Legend: A = Government received dividends (\$m); B = Government received dividends as a percentage of government investment revenue; C = Government received dividends as a percentage of net government investment income. Source: Calculated from Singapore Annual Budget Reports (various years).

Table 6: Temasek Holdings Group Income Statement (Fiscal Years 2001-03, \$b)

	FY 2001	FY 2002	FY 2003
Revenue	43	50	56
Gross Profit	13	15	19

Source: Temasek Review (2004: 19).

However, the disappointing financial results in some recent years suggest otherwise. Averaged financial results between 1999 and 2002 indicate four broad trends (see Table 7):

- Rapid growth in aggregate earnings;
- Declining returns on average capital;
- Declining operating margins, and;
- Increasing total debt to capital ratios.

The data indicate that GLCs' rapid offshore expansion has encountered start-up problems and competitive pressures that depressed short-term returns on capital. This is confirmed by the decline in operating margins, but here the pattern is uneven: operating margins remain high for those GLCs continuing to operate in regulated markets (e.g. SingTel). A contributing factor is that foreign acquisitions are being increasingly financed through debt, which puts pressure on operating margins and average capital returns. The rationale is that GLCs must now be accountable for their own risk capital, whereas in the past they had been able to deploy cheap risk capital from the nation's financial reserves. These trends indicate that overall the corporate control exercised by Temasek Holdings has not yet succeeded in developing GLC international capabilities to the stage of international competitiveness, notwithstanding the great effort that has been made in mobilising GLC resources for internationalisation.

Table 7: Key GLCs Financial Performance by Total Assets (2002)

GLC	Total Assets (S\$b)	Average 1999-2002		
		Return on Average Capital (%)	Operating Margin (%)	Total Debt/Capital (%)
Keppel Corporation	11.5	6.5	13.2	54
SembCorp Industries	6.0	9.7	12.6	50
SingTel	33.7	15.1	45.6	42
Singapore Airlines	19.2	8.3	22.1	15
CapitaLand	16.3	3.2	16.9	50
Singapore Power	13.5	10	31.4	28
PSA	7.2	19.2	50.5	22
Neptune Orient Lines	8.4	5.7	16.1	85
Chart.'d Semiconductor	5.8	(6.1)	25.8	4
Keppel Land	4.5	1.3	(8.9)	66
Singapore Technologies Eng.	4.3	32.2	15.2	n.a.
SMRT	1.6	7.1	37.6	36
SembCorp Marine	1.5	10.3	13.2	3
ST Assembly Test Services	1.3	(8.3)	13.7	20
Singapore Post	0.8	23.6	42.5	5
SembCorp Logistics	0.7	17.1	21	52

With the possible exception of Singapore Airlines, the data also suggest that larger GLCs (ranked according to total assets) have performed well in the era of internationalisation. Nevertheless,

there is evidence of the development of international capabilities in two of the leading conglomerate GLCs, SembCorp Industries and Keppel Corporation. Both have drastically expanded their foreign operations since the 1997 Asian Finance Crisis (Table 8) and have sought to create, renew, and institutionalise international managerial capabilities.

Table 8: International Expansion of Keppel Corporation and SembCorp Industries (1998-2003)

	1998	2003
Keppel Corporation		
Revenue from outside Singapore (\$b)	2.9	10.8
Revenue from outside Singapore as % of total revenue	17	19
SembCorp		
Revenue from outside Singapore (\$b)	0.4	2.8
Revenue from outside Singapore as % of total revenue	11	47

SembCorp Industries is a diversified engineering services group formed by the merger of Singapore Technologies Industrial Corporation and Sembawang Corporation in October 1998. The rationale of the merger was to allow competitive expansion into regional markets by providing scale economies, cost efficiencies through the eradication of duplication, and integrated service-supply networks. The fundamental base for this international expansion was complementarity of businesses and core capabilities between Singapore Technologies and Sembawang Corporation.

Singapore Technologies was an infrastructure group that focused on three business areas: infrastructure and industrial development, information technology, and travel and leisure. In 1994 Singapore Technologies' vision was to become a multi-national corporation by 2000 and this was underpinned by three core strategies: aggressive expansion into regional markets (particularly China and India) by mergers and acquisitions and partnering with the Singapore government to develop industrial parks and other infrastructure in the region; creating synergies between infrastructure and information technologies are thereby strengthening logistics as a core capability; and emphasising heavy infrastructure projects (e.g. power plants) that would establish market 'bases' for future expansion.

Sembawang Corporation was a marine engineering group that focused on four key businesses: shipping, maritime, engineering, industrial sectors. After the merger, SembCorp Industries had three core (infrastructure, marine and engineering, information technology) and ten non-core businesses (property development, financial services, food retail, ferry operations, retail of consumer goods, travel operations, hotel and resorts, healthcare, leisure parks, cineplexes). The strategic objectives of the group between 1998-2001 were threefold: first, to divest non-core businesses, particularly in Singapore itself, which after large write-downs allowed retirement of debt and significant cost savings; second, restructuring; and third, to accelerate international expansion through mergers and acquisitions. By 2002 over 45% of SembCorp's turnover came from foreign ventures.

Keppel Corporation is a diversified offshore and marine services group that operates in offshore and marine, property, infrastructure, and telecommunications. Keppel Corporation operates in 26 countries and is committed to leveraging its resources, strong branding, and international networks to realise new growth opportunities. Keppel Corporation continues to be guided by a corporate strategy of regional diversification, though this is becoming increasingly global in scope and has substantially expanded into areas unfamiliar to Keppel Corporation – including The Netherlands, France, and Spain

(see Table 9). This global expansion has been necessary for Keppel to create global service hubs in offshore and marine and for capitalising on international infrastructure projects. By 2002 over 75% of Keppel's turnover and 64% of profit came from overseas business – a dramatic increase since 1994 – and largely driven by the offshore and marine division.

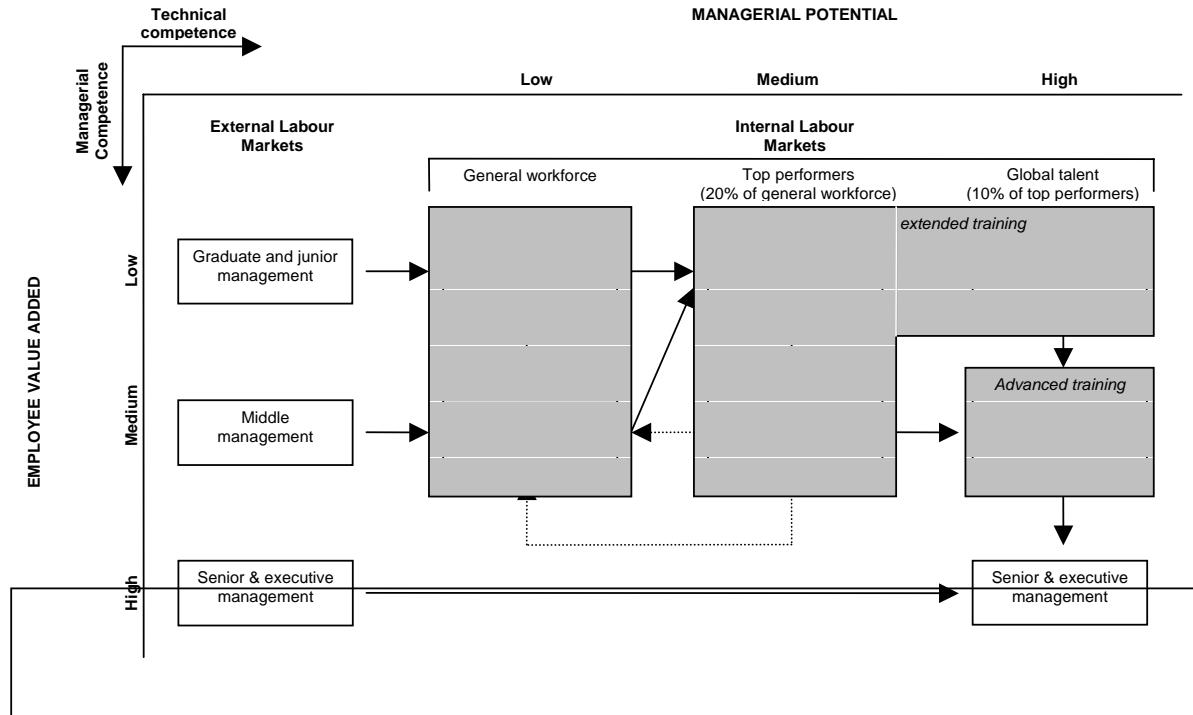
Table 9: Overview of Keppel's Global Operations (2002)

Division	Country
2002: Offshore and Marine	Azerbaijan, Brazil, Bulgaria, Mexico, Norway, Philippines, Singapore, The Netherlands, United Arabs Emirates, United States of America.
Property	Australia, China, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, USA, Vietnam.
Infrastructure	Argentina, Belgium, Brazil, China, France, Germany, Indonesia, Luxembourg, Malaysia, Nicaragua, Philippines, Singapore, Spain, Thailand, UK, USA, Vietnam.

The key to international capability development at these GLCs has been the system of corporate control. Temasek Holdings retains substantial equity in both firms and corporate directors have strong cross-appointments to other GLCs. The substantial shareholding by the government means that these GLCs are not effectively subject to takeover or allowed to fall into bankruptcy. Temasek Holdings has thus sought to simulate markets for corporate control through internal labour markets.

SembCorp and Keppel have both developed international managerial capabilities through internal labour markets, both within their operations and between Singapore Inc. itself at the senior and executive management level. Internal labour markets allowed these GLCs to devise human resource practices that are neither universal in methodology nor intention, but tailored to specific groups or 'talent pools' within the GLCs and the civil service. Talent pool composition is determined by the managerial potential and value-added work of individual employees. Multiple talent pools within the GLCs are used to ensure that these firms develop an on-going supply of international managerial knowledge, skills, and abilities. Consequently, each talent pool is subject to human resource practices that differ in intention and methodology. The aim is to maximise the knowledge, skills, and abilities of particular employee groups in the GLCs (see Figure 1). The key point about these internal labour markets and talent pools is that they are used within the GLCs or the civil service to develop international managerial capabilities through targeted recruitment and selection, training and development, and performance management.

Figure 1: Inter-Relationship between HRM Functions and the Development of International Managerial Capabilities in GLCs



The shift to internal labour markets has led to pronounced changes to senior and executive management recruitment and selection techniques within GLCs. Recruitment channels now focus on internal talent pools within GLCs and the wider civil service. Individuals selected for senior and executive management positions generally have the following characteristics (GLC annual reports 1994-2003 and author interviews with GLC HR directors):

- Are ranked in the top one hundred employees in the GLC according to value-added and managerial potential;
- Have been employed by the GLC for a minimum of six years;
- Possess a minimum of three years foreign market experience;
- Have undergone continual or extended training and are marked for advanced management training;
- Experienced rotation for periods of two to four years across industry segments within the GLC and performed above expectation, and;
- Have or are concurrently serving in senior civil service positions.

These characteristics mean that employees selected for boards and senior and executive management positions possess a set of knowledge, skills, and abilities considered essential for directing international operations. As indicated by Table 10, these knowledge, skills, and abilities are closely linked with in-house training programs within GLCs or the civil service and are frequently difficult to quantify.

Table 10: Training and Knowledge, Skills and Abilities within GLCs and the Civil Service

Training System	Targeted Talent Pool	Type	Desired KSAs
Basic	<ul style="list-style-type: none"> ▪ Graduate and Junior Management 	In-house: corporate training institutes	<ul style="list-style-type: none"> ▪ Core technical skills ▪ Basic management and financial abilities ▪ Knowledge of GLC industry and market environments ▪ Knowledge of GLC strategies and competitive advantages
Continuing	<ul style="list-style-type: none"> ▪ Graduate and junior management ▪ Middle management ▪ Top performers 	In-house: corporate training institutes and rotation.	<ul style="list-style-type: none"> ▪ Advanced technical skills ▪ Management abilities focusing on project management ▪ Firm knowledge of GLC operations, linkages between SBU operations, market and industry challenges
Extended	<ul style="list-style-type: none"> ▪ Top performers ▪ Potential global talent from top performers ▪ Global talent 	In-house: rotation, and secondment. Out-house: Assessment centres, business schools	<ul style="list-style-type: none"> ▪ Up-dating of technical skills ▪ Advanced financial abilities ▪ Advanced management abilities focusing on capacity to control geographically dispersed operations ▪ Developing a 'global mindset'
Advanced	<ul style="list-style-type: none"> ▪ Potential global talent from top performers ▪ Global talent ▪ Senior and executive management 	Out-house: business schools	<ul style="list-style-type: none"> ▪ International managerial capabilities

Acquiring international managerial capabilities has thereby necessitated changes to GLC training objectives and techniques. Change has been caused by the need to address performance problems arising from gaps in managerial competence attributable to limited knowledge, skills, and abilities related to foreign market characteristics. Change has also been caused by expatriate adjustment and difficulties in leveraging existing competitive advantage in global markets across strategic business units. This has been due to limited managerial flexibility and adaptability, and attrition or inadequate performance management techniques leading to substantial exit of core knowledge, skills, and abilities. These substantive changes to training and development objectives and programs have been accompanied by increases in both GLC expenditure on training and development and the number of annual training hours received per employee – both have increased by an average of 35% in the leading GLCs between 1998 and 2003 (GLC annual reports 1997-2003).

Particular concern is being placed on establishing training and development programs that are more structured, centralised, and targeted in intention. The GLCs and the civil service are now using sophisticated in-house training and development programs complemented by formalised out-house ones to create and enhance international managerial capabilities. In-house programs focus on corporate training institutes, job rotation and limited secondment, while out-house programs focus on courses at elite foreign business schools. Both have been essential to nurturing specific talent pools and developing international managerial capabilities. These training and development programs involve the:

- Creation of 'suites' of practices aimed at developing talent pools within the GLCs;
- Establishment of in-house training and development programs focused on corporate training institutes, job rotation, and limited secondment;
- Selective use of out-house training and development programs focused on courses at elite foreign business schools;
- Increased use of performance appraisals as criterion for further training and development, and;
- Creation of elite talent pools within the GLCs that receive disproportionate and accelerated training and development (GLC annual reports and author interviews with GLC HR directors).

Consequently, between 1997 and 2002 two key trends emerge in the corporate control system of Keppel Corporation and SembCorp Industries and the processes by which they are developing international managerial capabilities. First, a majority of directors (particularly CEOs and CFOs) were connected with the Singapore Civil Service and had been promoted from within the GLCs. The rationale was that talented senior civil servants generally underwent advanced business school training so that the Government had a pool of qualified, disciplined, and trusted people who could be appointed to senior GLC positions. Once in place, they could promote GLC foreign ventures and be rewarded or sanctioned within the civil service internal labour market according to their performance. Those who performed well would be promoted into more prestigious executive positions or directorships; those who under-performed would find their career stalled, being shunted off into bureaucratic backwaters or early retirement. Second, a majority of directors and senior managers had received advanced managerial training outside Singapore. Most GLC directors have undergone advanced commercial training through MBA courses at elite foreign universities; and most of these individuals have had civil service backgrounds.

In this way a concerted effort has been made by the Government and Temasek Holdings to appoint, train, monitor, reward, and sanction GLC directors and managers with international knowledge, skills, and abilities. The available data on directors and senior managers at Keppel and SembCorp indicate that individuals possess foreign business school education and remain closely associated with the State bureaucracy (Tables 11 and 12). This system for corporate control works most of the time with only routine monitoring and supervision without direct intervention of Temasek Holdings.

Nevertheless, a few noteworthy cases show that Temasek is prepared to step in when GLCs make losses or strategic mistakes are made. In January 2003 Flemming Jacobs was controversially relieved of his position as CEO of Neptune Orient Lines (American President Lines) after a run of losses during a difficult time in the liner shipping industry. Similarly, Yo Ling Hong was replaced as CEO of PSA Corporation after losing major clients Maersk and Evergreen to rival Malaysia. Prominent changes have also been made throughout Singapore Airline's history at times of underperformance, most recently with the removal of CEO Cheong Choong Kong in 2003.

Table 11: Board of Directors and Corporate Management at SembCorp (2002)

Characteristic	Number	% of Total
Total directors	11	100
Directors who serve on other GLC boards	7	64
Directors on government bodies	9	82
▪ On statutory boards	4	36
▪ On university boards	1	9
▪ Members of parliament	2	18
▪ Ministry	1	9
▪ Temasek	1	9
▪ Former or current senior military positions	0	0
▪ Other	0	0
Directors with higher education*		
▪ Education in Singapore (of 11)	4	36
▪ Bachelor degree	3	27
▪ Masters degree (including MBA)	1	9
▪ PhD	0	0
▪ Education outside Singapore (of 11)	9	82
▪ Bachelor degree	8	73
▪ Masters degree (including MBA)	4	36
▪ PhD	0	0
▪ Education at Ivy League or Oxbridge	3	27
Total corporate management	9	100
Corporate managers with higher education*	9	100
▪ Education in Singapore (of 9)	3	33
▪ Bachelor degree	3	33
▪ Masters degree (including MBA)	1	11
▪ PhD	0	0
▪ Education outside of Singapore (of 9)	6	66
▪ Bachelor degree	4	44
▪ Masters degree (including MBA)	6	66
▪ PhD	0	0
▪ Education at Ivy League or Oxbridge	3	33
▪ Bachelor degree	0	0
Corporate managers with former or current senior military positions	0	0

* Education figures may not add up to total number of directors/corporate management because an individual may hold more than one qualification (e.g. a bachelor degree and masters).

Table 12: Board of Directors and Corporate Management at Keppel (2002)

Characteristic	Number	% of Total
Total directors	12	100
Directors who serve on other GLC boards	4	33
Directors on government bodies		
▪ On statutory boards	3	25
▪ On university boards	4	33
▪ Members of parliament	1	8
▪ Ministry	0	0
▪ Temasek	1	8
▪ Former or current senior military positions	0	0
▪ Other	0	0
Directors with higher education*		
▪ Education in Singapore (of 12)	6	50
▪ Bachelor degree	5	42
▪ Masters degree (including MBA)	1	8
▪ PhD	0	0
▪ Education outside Singapore (of 12)	11	92
▪ Bachelor degree	6	50
▪ Masters degree (including MBA)	6	50
▪ PhD	3	25
▪ Education at Ivy League or Oxbridge	6	50
Total corporate management	6	100
Corporate managers with higher education*		
▪ Education in Singapore (of 6)	1	17
▪ Bachelor degree	1	17
▪ Masters degree (including MBA)	0	0
▪ PhD	0	0
▪ Education outside Singapore (of 6)	6	100
▪ Bachelor degree	4	67
▪ Masters degree (including MBA)	4	67
▪ PhD	1	17
▪ Education at Ivy League or Oxbridge	3	50
Corporate managers with former or current senior military positions	0	0

* Education figures may not add up to total number of directors/corporate management because an individual may hold more than one qualification (e.g. a bachelor degree and masters).

The available evidence thus substantiates the simulated market for corporate control by Temasek Holdings and the subsequent importance for GLC international capability development. The simulated market for corporate control has been used by Temasek to develop clearly defined processes and human resource practices to create and institutionalise the international capabilities required for GLC multi-national competition.

CONCLUSION

This paper has argued that effective systems of corporate control are essential to the development of international capabilities and inform the link between corporate and business strategy on the one hand and HRM practices on the other. In this regard, Singapore's public enterprise sector provides an unusual but insightful case study for addressing limitations in the strategic management and HRM literatures. The paper has provided two key findings. First, the Government of Singapore through the vehicle of Temasek Holdings has recognised explicitly that the internationalisation of GLCs necessitates a close and effective link between corporate and business strategies. This link may be observed at three cascading levels: between Temasek Holdings, corporate boards and their top management; between the GLC corporate board, top management and their subsidiary boards; and within individual subsidiary GLCs. The result is a potentially sophisticated, albeit evolving, system of corporate control in which directors and managers are being trained, appointed, monitored, and rewarded or sanctioned largely within internal labour markets and with the long-term aim of nurturing international managerial capabilities. While the civil service is not usually regarded as a talent pool for business executives, since 1985 the Government of Singapore has, with increasing purpose, sought to expose its best and brightest civil servants to advanced commercial training through MBA courses at elite foreign universities. The larger GLCs have begun to develop in-house strategic and HRM capabilities as the basis for international competitiveness. Given that state ownership insulates managers from market pressures for short-term profit in favour of expected growth in long-term earnings, the management of GLCs in Singapore is not obviously less strategically and managerially rational than those of private corporations. They refer to the same texts and speak the same language.

The second finding, however, is one of marked difference. Because GLC shareholdings are tightly held by the state, the PAP government cannot depend on the stock market to exercise the ultimate rewards and sanctions of corporate control. Instead the Government has, like an institutional shareholder, relied on its investment vehicle Temasek Holdings to simulate a market for corporate control. Outside Singapore this could be expected to evince scepticism of its effectiveness but Temasek seems to be finding its way towards a workable system that can also be made more transparent. This involves eschewing the micro-management of international ventures – a proclivity that led to trouble in the past – in favour of strategic control through appointments at board and CEO level. In general, stability may be observed in the tenure of GLC directors and senior managers when these firms are performing well. However, Temasek has also shown its determination to dismiss CEOs and restructure boards when GLCs perform badly. Internal promotion is the norm, but trouble-shooters with a strong track record in other GLCs are appointed to turn around underperforming GLCs. A leavening of experienced international directors and CEOs continue to be brought in to fill gaps in local expertise and to provide some balance of local representation and profile in foreign markets. While the evidence available to date is circumstantial and the record of performance is patchy, this system does seem to work, albeit imperfectly; a qualification which would still have to be made of the standard market for corporate control. Another five years may have to elapse before there is enough experience and data either to vindicate the sceptics or confound them.

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