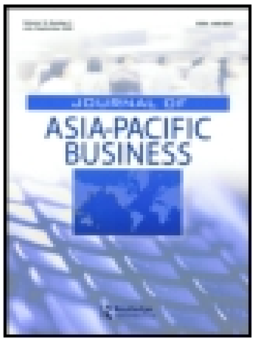


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# State Capitalism and Government Linked Companies

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**ABSTRACT.** This paper aims to examine the process of overseas investments by Singapore government linked companies (GLCs) in India which is an emerging market for Singapore investors. The "Look East" policy instituted by the Indian government after its 1991 Economic Crisis has found convergence with the Regionalization policy implemented by the Singapore government to create an external economic wing. The policy of regionalization would also assist in the expansion of GLCs overseas and prevent the marginalization of small and medium enterprises (SMEs) in the Singapore economy. This convergence of policy making creates synergy for more economic collaboration between both economies. Using India as a case study, this paper aims to illustrate that the motives behind state capitalism as practiced by the Singapore government is different from the common norm of state owned enterprises (SOEs). 

**KEYWORDS.** India, Singapore, regionalization, economies, state owned enterprises

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## *INTRODUCTION*

The economic development of Singapore since its independence in 1965 has been with the involvement of state enterprises called government linked companies (GLCs).[1] The GLCs are the main actors in Singapore's state capitalism approach to economic growth and development (*Ramirez C.D. and Tan L.H.*, July 2003). Unlike most state owned enterprises (SOEs) that are nationalized for political or employment creation in developing countries,[2] the Singapore GLCs are run on a commercial basis to accumulate profit and not for political or employment creation (*Ramirez C.D. and Tan L.H.*, July 2003). Furthermore, the commercially profitable Singapore GLCs established in key industries complemented the incentives offered to foreign multinational companies (MNCs) to establish operations and their regional headquarters in Singapore (*Fang, F., Qian S. and Tong W.*, October 2003). The profitability of the GLCs also enhanced the viability of the government's role in state led economic development. The type of state capitalism being discussed in this paper differs from the nature of state capitalism practiced in most of the developing world.[3] The type of state capitalism[4] practiced in Singapore also encompasses the critical role of SOEs in infrastructure development that has been the focus of the Singapore government in economic development. In particular, information infrastructure such as telecommunications that has played an influential role in the expansion of the Singapore economy (*Heracleous, L.*, 1999). Most of the GLCs were established in the late 1960s and 1970s to facilitate Singapore's economic development. In the 1980s and 1990s, more GLCs were formed from the corporatisation of former government departments and statutory boards (*Singapore Department of Statistics*, 2001). Working within the framework of a developmental state,[5] the Singapore government also formulated and implemented strategies to foster its home grown firms and enhance their international competitiveness.

The main objective of this paper will be to discuss the type of state capitalist strategy as practiced by the Singapore government. The paper will argue that as a small island with no natural resources, Singapore could not follow the path of economic nationalism in the post-independence era. Moreover, Singapore was and continues to be dependent on foreign capital for its economic growth. However, the path it took did not culminate into total economic dependency[6] because Singapore has gained more than revenue in its dealings with MNCs like technology transfer, management expertise, a brand image and experience in various economic sectors through its dealings with MNCs. Nonetheless, Singapore is feeling more threatened economically because of the growing competition from neighboring economies in Southeast Asia. Coupled with its maturing economy as well as the growing economic power of China and India, the Singapore government has to overcome these challenges (*Straits Times*, 18 July 2004).

The world has awakened to the challenge posed by China to Japan as the leading Asian economy but India is not far behind as Asia's third largest economy (*The Age*, 31 January 2004). The Chinese economy today is slightly bigger than Italy (the eurozone's third largest economy) and bigger than Canada, in terms of GDP (Gross Domestic Product) (*BBC News*, 13 December 2001). China's economy is growing at more than nine percent annually and India's at eight percent. Furthermore, China's economy is expected to be double the size of Germany's by 2010 and to overtake Japan's, the world's second largest, by 2020. Increasing per capita incomes and a relatively young population structure in China has also seen large increases in consumer spending turning China into a lucrative export and investment market. For example, the number of personal computers per 100 people in China has increased 746 percent from 1995 to 2002 (*Business Times*, Singapore, 30 October 2003).

Policy-makers in Singapore have accepted China as its competitor for foreign direct investment (FDI) (*Business Times*, Singapore, 13 May 2002). China has also altered the flow of FDI to Southeast Asian countries and has benefited at the expense of Southeast Asian countries (*Washington Quarterly*, Summer 2002). For example, in the early 1990s, three-fifths of FDI moving to Asia were channeled to Southeast Asia. By the end of the 1990s, two-fifths of FDIs flowing to Asia went to China and only about one-fifth went to Southeast Asia (*Rajan*, *R.*, June 2003).While China transforms itself as the world's manufacturing hub with its lower cost labour, India is evolving into the world's services hub. India's expertise and knowledge in high-tech industries such as Information Technology (IT) and pharmaceuticals has enabled it to attract more FDI that reached US $4 billion in October 2003 (*Business Times*, Singapore, 30 October 2003). If India sustains a six percent growth rate for 50 years as predicted by some financial analysts, it will equal or overtake China in that time (*Foreign Affairs*, July/August 2004). The paper argues that part of the solution to meet the growing economic might of both China and India will be to regionalize the Singapore GLCs to invest and expand overseas in emerging markets. This paper will use the construction industry in India to illustrate how Singapore GLCs could venture into the Indian market.

Singapore GLCs are also being driven to expand overseas by the momentum of globalization manifested by the integration of national economies into a multilateral trading system. Within the ambit of the World Trade Organization (WTO), various agreements, such as the General Agreement of Trade in Services (GATS), have been working towards the liberalization of closed economies. Singapore has been active in the promotion of bilateral and regional free trade agreements (FTAs) and has steadily liberalized its various economic sectors to allow foreign competition. This paper will also argue that Singapore's state capitalism strategy implemented through its GLCs venturing overseas will face challenges, especially in strategic industries. To counter hostility directed towards the Singapore GLCs acquisition or collaboration strategy with foreign companies, the Singapore government could dilute its equity in the GLCs and focus on emerging markets such as China and India that are "hungry" for FDI. The GLCs should also focus on the specific sectors and policy makers that welcome foreign investments and collaboration. However, the process of diluting government ownership in GLCs does not necessarily signal their greater acceptance among potential business partners overseas. Nonetheless, the paper also argues that GLCs have to expand overseas because its inability to compete overseas would create economic and political tensions with local small and medium enterprises (SMEs) in an increasingly shrinking domestic market.

At the onset of its economic development in the 1960s, the Singapore government recognized the importance of foreign investments and established the Economic and Development Board (EDB) to attract Multinational Corporations (MNCs) to invest in Singapore (*Schein E.H.*, 1996). Officials from the EDB stationed overseas effectively made the rounds of most major corporations in the United States and Europe to entice them to Singapore (*Chan C.B.*, 2002). In the mid-1980s, Singapore's former Prime Minister, Lee Kuan Yew, urged Singapore companies to go regional and invest in overseas ventures (*Asia Times*, 27 July 2002). The regionalization policy is in line with the global trends of transnationalization of capital that has become a facet of global economic integration (*Boswell, T. and Chase-Dunn*, *C*., 2000). This strategy of regionalization being implemented was primarily to compensate for Singapore's small domestic market of four million people. However, this off-shore strategy was viewed with concern by potential foreign partners because of the Singapore government's large stakes in the GLCs. For example, one of Singapore's largest GLCs, SingTel, had its bid for Malaysia's Time Engineering and Hong Kong's Cable and

Wireless HKT turned down in 2000 because both foreign governments were wary of a Singapore GLC owning a strategic asset in their countries (*Agence France Presse*, 16 May 2001). The same security concerns were again highlighted when SingTel bid for a majority stake in Cable and Wireless Optus in Australia but eventually won the bid for US $8.8 billion.

### *Which State Capitalism?*

The demise of the Soviet Union in the post cold war era has seen the rise of market capitalism as the "best form of capitalism." A number of prominent political leaders and economists from the West have touted their brand of Anglo-Saxon capitalism as having won the cold war and are persuading the rest of the world to follow suit (*Moore, K. and Lewis, D.*, 1999). However, given the variety of state owned enterprises (SOEs), this suggests that they serve different functions and react to their diverse environment in various ways. For example, SOEs could be labeled as "resource preserving," "resource hoarding," "values promoting" while some are "rent collectors"[7] among others (*MacAvoy, Stanbury, Yarrow and Zeckhauser*, 1989). Table 1 indicates a possible broad category of State Owned Enterprises (SOEs), but the list is not exhaustive. The paper will show that the GLCs in Singapore are closer to the values promoting type. The government has argued that it established state enter-

TABLE 1. Types of State-Owned Enterprises

| **Type of State Owned Enterprises** | **Description** |
|---|---|
| Resource preserving | Government assumes ownership to maintain a vital industry. Usually enterprises that is not profitable under private ownership. |
| Resource hoarding | Governments find it difficult to allocate property rights to natural resources perceived as belonging to the entire community. |
| Values promoting | Government wishes to promote noncommercial values and these SOEs are kept within government ownership because its vital industry, e.g., leading edge technology–high technology, public schools, nursing homes and defense industries. |
| Rent collectors | Government is involved in some resource based industries to share the profits created by the increase in commodity prices. |

Source: MacAvoy P.W., Stanbury W.T., Yarrow G. and Zeckhauser R.J., *Privatization and State-Owned Enterprises, Lessons from the United States, Great Britain and Canada*, 1989, pp. 12-13.

prises known as GLCs in key areas of business such as ship repairing, ports, and transportation because it could not afford to let these opportunities bypass Singapore (*Okposin, S.B.*, 1999). These sectors are also high risk industries and private companies are often unwilling to invest in such areas or they don't have the required funding for such enterprises.

In essence, the Singapore brand of state capitalism could be defined as state "equity participation with private individuals or companies embarking on high-risk, high-reward ventures–or, misadventures in the event of failure" (*Straits Times*, 3 July 2004). The government has pointed out that the issue of ownership of state enterprises is not as pertinent as its profitability which would add to Singapore's revenue. The first phase of state capitalism in Singapore has seen the rise of "home grown" companies such as the Development Bank of Singapore (DBS), Petrochemical Cooperation of Singapore (PCS), Singapore Airlines (SIA), Singapore Telecoms (SingTel), Port of Singapore Authority (PSA) and others. To continue their other main function as capital accumulators, the GLCs have gone on to the second phase of state capitalism, that is, to compete with other MNCs in the international market because the Singapore market is too small and has been liberalized to allow the entry of MNCs. In this regard, the GLCs do not compete directly with foreign MNCs but compete with local private entrepreneurs (*Okposin, S.B.*, 1999). Therefore, as local private entrepreneurs venturing onto the international market, they will be competing less with local private companies. Venturing overseas is risky, but Asian brand names such as Sony, Sanyo, Hitachi, Sumitomo Bank, Hyundai, Samsung and others have blazed the trial for other Asian companies.

State led capitalism as epitomized in Japan by the sogo shosha (general trading companies)[8] and their international network represented a model for the rest of the East Asian newly industrializing countries (NICs) (*McCathy*, 1994). However, economies in Southeast Asia were unable to expand governance and equity through state capitalism because of the Asian Financial Crisis in 1997. The financial crisis in Japan also threw doubt onto the model of state led development pioneered by Japan and copied throughout Southeast Asia. In other East Asian countries such as the Republic of China (Taiwan), state capitalism was brought to the fore of economic planning as their government liberalized their domestic market (*Wu, Y.S.*, 1994). As the government in Taiwan played an increasing role in an export oriented economy, it faced several challenges such as the limited size of its domestic market. There was no alternative but to implement an export oriented industrialization strategy (EOI) that meant exposing its domestic companies to the challenge of international competition (*Wu, Y.S.*, 1994). The outward oriented strategies of developing countries in East Asia expanded the scope of production as opposed to inward oriented strategies of other developing regions and they were rewarded with favorable economic growth (*Balassa, B*., 1989). There are various theories for firm internationalization such as Stages models, Contingency models and Action models (*Kuada, K. and Sorensen*, *O.J*., 2000).

### *Holding Companies*

The government of Singapore has two main investment arms; they are Temasek Holdings and the Government of Singapore Investment Corporation (GIC). However, in the initial phase of state capitalism, Temasek also assumed the tasks of corporate governance from the Singapore Ministry of Finance (MOF) and the Economic Development Board (EDB). In this role, Temasek supervised the corporatisation of large state business entities such as the PSA and SingTel (*Straits Times*, 3 July 2004). The initial phase of establishing corporate governance is nearly completed and Temasek in the second phase of state capitalism has to invest, nurture and encourage the overseas expansion of Singapore GLCs. The GIC was established to manage the government's long-term assets. In this context, the foreign assets of the Singapore Board of Commissioners of Currency that was required to support the issue of the Singapore currency were transferred to the management of the GIC. Internationally, the GIC has invested a sizeable sum of the government's surplus revenue in a diverse array of stocks in various economic sectors in several countries (*Okposin, S.B*., 1999). Besides profit making investments, the other main criteria for investment is strategic to placate the government's view of vulnerability of the Singapore economy.

While it could be argued that Temasek and the GIC play a similar role to holding companies in Europe they are also different because they are not as involved in the management decisions of the GLCs as their European counterparts (*Laux, J.K. and Molot, M.A*., 1988). In their equity accumulation role, both Temasek and GIC have invested in several property projects overseas. For example, GIC through its subsidiary GIC Real Estate has taken an eight percent stake in developer Beijing Capital Land in China. The eight percent stake was reported to cost have GIC SGD $67 million (*Business Times*, Singapore, 3 March 2003). GIC Real Estate is actively building up its real estate portfolio and has paid

US $42 million to develop its office site in Shanghai, China. Temasek Holdings owns significant stakes in several large GLCs such as Singapore Airlines (SIA), the Port of Singapore Authority (PSA) and the Civil Aviation Authority of Singapore (CAAS). This is similar to the situation in China where listed company groups are headed by holding companies that are majority owned by a state owned company (*China Economic Review*, Vol. 13, 2002). The share of government ownership is also a useful indicator to the eventual objective of the SOEs. Besides GIC and Temasek, the various Ministries and Statutory Boards in Singapore could also create a private subsidiary for revenue purposes. For example, the Housing and Development Board (HDB) has a full subsidiary called Cesma International.

Temasek Holdings has shares in over 200 companies in various sectors of the Singapore economy. The Temasek chairman, former Trade Minister Dhanabalan reports to the Minister for Finance. Temasek was incorporated in 1974 and is the monitoring arm of the Finance Ministry, as it tracks the performances of the various investments and companies under its portfolio.[9] In its capacity as the representative of the Singapore government's equity in the GLCs, Temasek exercises its ability to review the appointment of directors and chairmen to the boards of its various companies.[10] Temasek's investments accounted for 13 percent of Singapore's gross domestic product (GDP) and the rest of the public sector a further nine percent (*Reuters*, 28 August 2002). Another fundamental difference between Singapore's GLCs and other SOEs in developing countries concerns the involvement of the government in their business transactions. Business deals between MNCs in developing countries that involve SOEs are discussed with bureaucrats from various government agencies (*Cavusgil, S.T. and Chauri, P.N.*, 1990). However, past Ministers of Finance such as Dr. Richard Hu and the late Hon Sui Sen had given autonomy for the various companies to choose how they operated (*Straits Times*, 21 June 2002). In this context, the Singapore government resisted the attempt to send civil servants to manage and run the GLCs (*Straits Times*, 3 July 2004).

Similar to their counterparts in Europe, the Singapore government's holding companies have expanded the involvement of the state beyond its shores (*Laux, J.K. and Molot*, *M.A.*, 1988). For example, SIA owns 49 percent of Virgin Atlantic, PSA has business interests from Asia to Europe and the CAAS already owns a stake in New Zealand's Auckland Airport (*Agence France Presse*, 16 May 2001). However, the overseas expansion of Singapore GLCs is continuing to cause unease in the Southeast Asian region. For example, SingTel has increased its stake to 35 percent in Telkomsel, Indonesia's largest mobile telephone operator (*South China Morning Post*, 22 May 2003). Government owned ST-Media has a 49 percent stake in state-owned telecommunications firm PT Indosat and Singapore's main investment corporation Temasek Holdings is the preferred bidder for a 51 percent stake in Indonesia's fifth largest bank, Bank Danamon (*South China Morning Post*, 22 May 2003).The Singapore government has denied any role in the acquisitions of GLCs, like DBS Bank and SingTel (*Agence France Presse*, 16 May 2001). The default of loans by SingTel subsidiary and undersea telephone cable business C2C indicated that the Singapore government or its agencies would not "bail out" distressed firms and they have to function as a private entity (*United Press International*, 7 October 2003).

With the need to nurture and invest in Singapore companies intending to expand overseas, the passive shareholder position of Temasek has altered with the adoption of a more pro-active strategy to create value and build platforms for successful future companies. With the appointment of a new executive director, Madam Ho Ching, Temasek-Linked Companies (TLCs) have to establish a plan to explain the basis of delivering a steady revenue stream beyond the next five to ten years (*Straits Times*, Singapore, 27 June 2002). The main components of Temasek's strategic growth plan depended upon the new dynamism that Asian economies had acquired after the Asian Financial Crisis of 1997. Economic recovery and growth are also established against the background of free trade agreements (FTAs) and the emergence of Asian economic giants China and India (*Straits Times*, 13 February 2004). In this context, Singapore is in the process of nurturing its companies so that they could compete with foreign firms overseas. Comparatively, Singapore's investment's in China has been much larger than those in India. From the ethnic entrepreneurship perspective, China accords some familiarity to Singapore's predominantly Chinese population and businesses (*Yeung, W.C.,* 2002). In this context, Chinese entrepreneurs including those from Singapore have spread their "bamboo networks" across countries and even regions. Although there is a significant minority of Indians among Singapore's population, the administrative and bureaucratic drawbacks as well as inconsistent foreign investment policy in India has failed to draw foreign investors (*Okposin, S.B*., 1999).

### *GLCs versus Non-GLCs*

The transformation of China and eventually India as the economic powerhouses of Asian economies posed both challenges and opportunities for Singapore. Singapore companies including the GLCs have the capacity to attain international status and the Singapore government should strategize on developing the Singapore brand (*Report of Economic Review Committee*, February 2003). The emergence of new regional markets within a 7-hour radius flight time from Singapore which includes most of India and main cities in China would ease the competition between the GLCs and non-GLCs in an already saturated domestic market in Singapore. The private sector had expressed concerns over the years that the number of GLCs had grown and encroached into their business space.[11] In this regard, the Economic and Review Committee (ERC) of Singapore recommended that government Ministries and Statutory Boards should prevent the creation of new companies to provide services that could be adequately and competently covered by the private sector. Prime Minister Goh has also initiated plans to distribute more shares in GLCs to Singaporeans as well as establish a unit trust to sell GLC shares to the public (*International Herald Tribune*, 28 January 2004).

Temasek, through its new charter, has also announced that it plans to consolidate its operations and focus on core economic sectors. In this context, Temasek has shed nearly SGD $6 billion worth of shares in TLCs such as Keppel, SembCorp, Capitaland and Keppel Land (*Financial Times*, London, 18 November 2002). The Singapore government has also sold off Nat Steel Electronics to Solectron Corporation in California for US $2.4 billion, fulfilling Temasek's charter to offload non-core assets. Temasek has also trimmed its 67.18 percent stake in SingTel for an estimated US $1.25 billion. This added move towards GLC disinvestment is also attributed to the Singapore-US FTA that came into effect on 1 January 2004, requiring the Singapore government to sell off its majority stake in SingTel. The near monopoly of the press media in Singapore is also changing with the involvement of four GLCs. Led by MediaCorp, the other three GLCs, Singapore Mass Rapid Transit, GelGro and SingTel, have plans to publish a free news sheet to be given away on trains and buses.

Following the divestment moves by the government and Temasek, the ERC also recommended that the GLCs should have three clear criteria which govern their involvement in the domestic economy. These are the management of critical resources, ownership of public goods to ensure availability of critical services for all sectors of the population and the development of new growth engines.[12] In other non-strategic areas, the small and medium enterprises (SMEs) could assume the responsibilities of the GLCs and eventually develop into regional or global players. The ability of SMEs to cluster themselves through complimentary strengths and venture into overseas markets should also be encouraged and supported by the relevant government agencies.[13] According to IE Singapore's Regional Director for South Asia and the Middle East, Raheed Nargund, "Singapore companies, are in favor of the clustering approach which tend to be small by international standards, stand a far better chance of success by teaming together to clinch projects, which may otherwise be too large for them to handle individually" (*Business Times*, Singapore, 13 February 2003). The discussions on the role of GLCs and their impact on the domestic economy were actively debated in the Singapore parliament against the backdrop of the recommendations made by the Entrepreneurship and Internationalization Subcommittee of the Economic Review Committee (ERC).[14] However, moves to limit the role of GLCs in Singapore's domestic economy will be difficult because GLCs have on average outperformed or at worst equaled the record of non-GLC companies (*Agence France Presse*, 3 September 2002).

While economists may advice against marginalizing the role of GLCs in the domestic economy, the politicization of the issue has prompted Temasek holdings to draft a charter to explain its aim of reducing the role of GLCs in the domestic economy (*Agence France Presse*, 28 August 2002). Temasek holdings have divested interests in a number of GLCs such as CPG Corporation, a well known consultant in architecture and engineering (*Straits Times*, 8 November 2002). Unfortunately, the process of economic integration in East Asia has been hampered by protectionist, tariff and non-tariff measures (*Legewie, J. and Ohle, H.M.*, 2000). Alternatively, to venture into new emerging markets like India, Temasek had established the Merlion India Fund of about US $100 million. The objective of the Merlion Fund is to provide growth capital for Indian companies to expand within India and beyond (*Temasek Press Release*, 26 August 2003). The fund would also invest in companies aiming to venture into India to establish their businesses. Temasek Holdings had also acquired a 5.2 percent paid-up equity capital on India's ICICI bank.

### *Limited Domestic Market*

A prime example of Singapore's limited domestic market is the housing industry. Singapore's success in providing nearly 867,000 public flats by the end of 2002 of which 94 percent are owned occupied has been beneficial to its population, but has dampened its domestic construction industry (*Singapore Yearbook of Statistics*, 2003). While external factors such as the Asian Financial Crisis of 1997-98 had severely reduced the demand for new or upgraded flats in Singapore, the addition of domestic factors has also stifled demand. Private housing prices in Singapore has dropped more than 37 percent since 1996 and public flats has dropped by 30 percent during the same period (*Saywell*, 10 July 2003). In the private residential sector, 15,790 private apartments sat empty for the first half of 2003, leading to a vacancy rate of around 7.6 percent of total private properties. The situation is not expected to improve with the supply of new housing units expected to surge to 11,999 in 2004 and 12,493 in 2005. Similarly, the public residential market consisting mainly of Housing and Development Board (HDB) flats did not fare any better with 12,000 flats lying vacant at the end of 2002 (*Saywell*, 10 July 2003). Delayed property launch by developers, a graying population of "empty nesters," stagnant wages and rising unemployment have also severely impacted on the residential property market. Added to this, the corporatization of the HDB into a Building and Development Division has also led to downsizing and retrenchment of staff. HDB staff was given retrenchment benefits but some opted for early retirement through the Special Retirement Scheme (SRS). The main option for Singapore firms and the corporatised HDB are venturing into emerging overseas markets.

The huge emerging markets for housing construction and infrastructure needs are in China and India. Senior Indian officials visiting Singapore noted the ability of the Singapore government to provide affordable urban housing. Singapore's expertise and experience may help to ease the critical urban housing shortage, especially in the Indian cities. Former Indian President K.R. Narayanan had visited Singapore's townships to have a look at Singapore's Housing Development Board (HDB) schemes and concept plans (*The Hindu*, 12 November 2000). Working towards achieving mutual benefits, India and Singapore have decided to enhance their bilateral cooperation in infrastructure development in several areas especially housing construction. Singapore architectural companies such as RSP Architects and CESMA International have the required expertise for

Master Township planning as well as building and design. In this context, in October 2002, a 29 member business delegation organized by International Enterprises (IE) Singapore and the Building and Construction Authority (BCA) of Singapore was led by Singapore's Minister of State for National Development, Mr. Mah Bow Tan. This was a follow up initiative to the earlier trade mission undertaken by Dr. Vivian Balakrishnan, Minister of State for National Development, on a visit to India to explore investments and potential collaboration opportunities in the Indian construction industry.

In line with its strategy to focus in the more advanced industrial states in India and the southern region, Singapore had looked at the following states: Maharashtra, Andhra Pradesh and Tamil Nadu (*Business Line*, 9 October 2002). The focus on the various states was made based on IE Singapore's findings about the construction sector. Singapore's focus on these states are based on a International Enterprises (IE) Singapore study that noted the rate of urbanization is 42 percent in Maharashtra, 27 percent in Andhra Pradesh and 44 percent in Tamil Nadu (*Business Line*, 9 October 2002). In these more urban states there are good opportunities for Singapore companies to collaborate in housing development. The concept of township living in apartment blocks with nearby facilities such as shops, sporting complexes, recreational areas is gaining popularity in Hyderabad, the state capital of Andhra Pradesh. In this context, Andhra Pradesh which is India's fourth largest state in terms of industrial output represents a potential boom for the residential sector. With their expertise and experience in township planning and construction, Singapore companies have a readily recognizable brand in their advantage. IE Singapore has made the point that Singapore companies should exploit the potential of their brand name and fill the void for demand or else it risks others using its brand names such as "Sentosa" to attract buyers and investors.

### *Residential Construction Sector*

On gaining independence from Britain in 1947, millions in India are still suffering from the lack of suitable housing among other basic needs (*Frontline*, 22 June–5 July 2002). Apart from a shortage of dwelling units, existing dwellings have also physically deteriorated substantially (*D.M. Sukthankar*, 1991). In 1981, it was estimated that about 21 percent of dwelling units were more than 40 years old and about 10 percent of the stock was over 60 years old. Large scale rural to urban migration considerably worsened housing conditions (*D.M. Sukthankar*, 1991). The growth in housing demand has not been met with supply because the government's investment in housing had remained constant from the 1970s and the private financial sector had been shut out because of regulations (*Cities*, Vol. 35, 2000). Several government agencies are also responsible for housing developments leading to a lack of coordination among them (*Habitat International*, Vol. 26, 2002). The central and state governments do not have the required funds to improve the quality of housing developments and accompanying infrastructure. Improving the collection of revenue to generate additional funds for urban infrastructure is difficult. The alternative is to liberalise the housing and construction industry and invite foreign investments and cooperating through joint ventures. The rising urban population in India imposes a severe burden on public facilities. Housing shortages have become critical in India and individual states such as those in the southern part of India have begun to adopt a more proactive Housing Policy to reduce housing shortages (*The Hindu*, 25 July 2002). For example, in the southern Indian state of Karnataka, the Chief Minister, S.M. Krishna, has launched a massive campaign to provide at least 200,000 affordable homes to the poor each year (*Frontline*, 22 June–5 July 2002).

The difficulties underlying the housing situation in India is made more complex because over half of India's billion population are considered poor, living on less than US $1 per day, while the emergence of an expanding middle class has different consumer needs such as housing. The categorization of the Indian middle class was often based on the report by the National Council of Applied Economic Research (NCAER) in the mid-1990s. The NCAER estimated that the very rich numbered around 6 million (1%) of total population and below these were three sub-classes. These are the Consuming[15] class of about 150 million (17%), the Climbers of some 275 million (30%), and the Aspirants of 275 million (30%). Below this were the Destitute of around 210 million (23%). The expansion and increasing prominence of the middle class has been largely influenced by the Indian economic reforms of 1991. Prior to the 1991 economic reforms of 1991, the "old" Indian middle class consisted of school teachers and Indian Administrative Service (IAS) officers (*Comparative Studies of South Asia, Africa and the Middle East*, Vol. XX, No. 1 & 2, 2000).

Based on a population of one billion people, the salaried class in the private and public sector alone number around 30 million without including another 10-15 million for doctors, consultants, lawyers and the entrepreneurs (*Financial Express*, 5 December 2002). The new middle class are to be found in the expanding service industries post-1991 such as those in hi-tech industries like information technology (IT). The more industrialized state capitals of Mumbai (Maharashtra), Calcutta (Bengal) and Ahmedabad (Gujarat) are well known for their urban overcrowding. India's federal capital Delhi was also not spared by the expanding urban population. A relatively new trend has been the expanding urban population of the southern Indian cities of Madras (Tamil Nadu), Bangalore (Karnataka) and Hyderabad (Andhra Pradesh). These southern states are expanding relatively fast because of high tech industries such as IT, biotech and software development. These high-technology urban centers have pulled in skilled migrants from other parts of India which flock to these states seeking employment and better lives for themselves and their families. Across the whole of India, some 50 towns and cities are expanding rapidly leading to a shortage of 50 million homes that amounted to approximately US $25 billion in investments (*Straits Times*, 9 October 2003). Nonetheless, India's urban housing shortage is pegged at nearly nine million units.

The construction industry is likely to be the growth pillars for the Indian economy in the Tenth Five-Year plan. According to International Enterprises Singapore (IE S'pore), India's residential construction market was worth SGD $6.77 billion in 2001 and has grown by 15 percent every year from 1997 to 2002 (*Straits Times*, 17 March 2003). The overall construction industry in India is driven primarily by private sector residential construction activities. IE Singapore pointed out that Singapore firms should focus on integrated township developments which has good growth potential and Singapore has decades of experience with these kind of construction. The housing shortage in India's urban areas is around nine million units. New entrants to the construction industry especially foreign companies face a number of challenges, such as an investment of at least US $10 million and a minimum project size of 40 hectares (*Business Times*, Singapore, 12 September 2003). However, IE Singapore believes that Singapore construction companies should try and gain first mover advantage with some of the Indian companies interested in township development.

The township development projects would appeal to the Indian urban middle class of approximately 20 million people because there was greater acceptance among them of an organized and modernized living environment (*Straits Times*, 17 March 2003). The Indian middle class places house ownership as their main priority and are willing to pay as much as five times their annual salary on purchasing a house. Increasing availability of home financing schemes also facilitates the purchase of houses. Some of these expectations come from the unfulfilled demands of India's burgeoning middle class who face a lack of choice as well as the shortage of reliable developers in residential development. This provides immense opportunities for reliable and credit worthy foreign companies with a good track record to make an impact in the Indian residential market. As a whole, the infrastructure sector will also generate greater demand such as the urgent need for 6,300 kilometers of road by the end of 2003 and another 7,000 kilometers by 2007 will provide a positive catalytic effect on private investment (*Economic Times*, 10 November 2002).

As India is not in a position to finance its housing requirements, it is looking increasingly towards the domestic private sector and foreign collaboration to undertake these housing projects (*Straits Times*, 17 March 2003). In order to stimulate the expansion and modernization of its infrastructure, the Indian government has opened up the construction sector to attract private and foreign investors and terminated its own monopoly over the construction industry. For example, the Indian Federal Minister for Urban Development, Ram Jethamalani, had decided to terminate the Delhi Development Authority's monopoly in developing land in the federal capital of Delhi (*Business Times*, Singapore, 23 June 1998). The housing shortage has become critical in India and individual states such as those in the southern part of India have begun to adopt a more proactive Housing Policy to reduce housing shortages (*The Hindu*, 25 July 2002). For example, in the southern Indian state of Karnataka, the Chief Minister S.M. Krishna has launched a massive campaign to provide at least 200,000 affordable homes to the poor each year (*Frontline*, India, 22 June–5 July 2002). In total India's construction business in the industrial, residential and commercial segments is worth some US $63 billion (*Business Line*, 9 October 2002). The rising contribution of India's urban population to its national income as shown in Table 2 highlights the critical need to improve urban housing.

The Building and Construction Authority (BCA) of Singapore has asked Singapore's Minister for National Development, Mah Bow Tan, to lead a consortium of 31 Singapore companies and officials involved in construction to the major Indian cities of New Delhi, Hyderabad and Chennai. The construction companies are mainly SMEs and some of them had used a clustering or consortium approach to develop housing projects in India. For example, among the 31 companies,[16] there are 14 companies that have grouped together to provide architectural, consultancy and contracting jobs. These 14 companies are members of the Singapore Township Alliance (STA) and they had signed MOUs with two Indian firms, Hi-Line Constructions and Hi-Pillar Constructions. The project at stake will be the construction of residential properties called Singapore heights and Radhika

TABLE 2. Contribution of Urban Sector to National Income as Percentage of Total National Income from 1951 to 2001

| Year | Percentage of urban to total population (%) | Estimated contribution to total national income (%) |
|---|---|---|
| 1951 | 17.3 | 29 |
| 1981 | 23.3 | 47 |
| 1991 | 25.7 | 55 |
| 2001 | 30.5 | 60 |

Source: Government of India.



Brindavan. The project will comprise 95 houses with facilities such as health clubs and swimming pools (*Straits Times*, 12 September 2003). In 2002, Singapore firms managed to secure 36 consultancy projects in India, that is equivalent to about 24 percent of the total consultancy projects it won overseas (*Business Times*, 10 September 2003).

### *Financing*

The Indian government is not able to finance the annual SGD $8.5 billion building program for new urban housing and upgrading the existing housing available. Therefore, it has examined various options to raise capital and attract investments. Hence, it has turned to the domestic private sector and foreign participation to implement these construction projects (*Straits Times*, 17 March 2003). The moves by the Indian government to allow foreign direct investment (FDI) in the real estate sector and the establishment of real estate mutual funds are being considered as potential catalysts to spur the expansion of the construction industry (*Deshpande, G. and Das, M*., 2003). However, the response by foreign investors has not been enthusiastic and the FDI approved for the building industry since 1992 has been less than one percent of the total FDI inflows into India (*Business Line*, 27 October 2002). In an attempt to stimulate greater interest and foreign participation, the Indian government has allowed 100 percent foreign participation in developing integrated townships.

The establishment of the real estate mutual funds (REMF) will invest directly in property or indirectly in the equity of real estate investment trusts (REITs).[17] The introduction of the REMF is viewed in a positive manner as it would provide not only capital for developing infrastructure and housing by directing small investors into the construction industry but also provides investors additional revenue for their investments

(*Business Line*, 27 October 2002). The Indian government has also given greater emphasis to the growing housing problem in India by giving greater priority to housing and financing needs in the Tenth Five-Year Plan. Besides this, the Indian government has also requested the Asian Development Bank (ADB) to assist in the long-term objectives of the National Housing Policy. The ADB has responded by approving a US $300 million loan under the Housing Finance Project. The three borrowers under this ADB loan scheme, namely, the National Housing Bank (NHB), Housing and Urban Development Corporation (HUDCO) and Housing Development Finance Corporation (HDFC) will each receive US $100 million loan. The housing sector in India was also given a boost by handing the provision of interest deductible income tax of up to US $3,000 annual wage income for potential home owners wishing to purchase a self-occupied house property.

### *Hyderabad State Government Support*

Hyderabad, the state capital of Andhra Pradesh is ranked among India's five largest cities. Singapore's interest with Andhra Pradesh is personified in its close links with the state's Chief Minister, Chandrababu Naidu. Naidu has been active in promoting information technology (IT) and e-governance to increase transparency and efficiency in his state. After Singapore had built its flagship investment project in India called the Bangalore IT Park in the neighboring state of Karnataka, Singapore was actively lobbied to build other software technology parks (STPs) by various Chief Ministers in India. Singapore's Prime Minister Goh has said of Naidu, "he is dynamic and a man with a vision to change the State," (*The Hindu*, 21 January 2000). PM Goh visited Hyderabad the state capital of Andhra Pradesh in January 2000. Naidu has built his Hitech City[18] along similar line as Bangalore IT Park in Karnataka and the 50 member business and technical delegation accompanying PM Goh were very interested in Naidu's Triple IT plan (*Straits Times*, 21 January 2000).

During his visit to HiTec City, PM Goh replied in answer to questions from the press that his government and Singapore firms would evaluate whether to establish operations in HiTec City (*Business Times*, Singapore, 21 January 2000). A Singapore government linked company (GLC) called JTC International (JTCI) had shown interest in developing facilities in HiTec City after PM Goh's visit (*Straits Times*, 24 January 2000). In this regard, JTCI has received clearance from the Indian Foreign Investment Promotion Board (FIPB) to establish a subsidiary in

Chennai. JTCI has already completed the master planning for Chennai's Mahindra Industrial Park and is in the process of bidding for bigger construction projects in the IT corridor and infrastructure development in the Southern Indian states (*Financial Express*, 28 June 2000). The Singapore government continued its exploration in India's domestic market by having its Trade and Industry Minister, George Yeo, lead a delegation to India's major cities, including Hyderabad and HiTec City, in November 2000 (*Straits Times*, 24 November 2000). The importance that Andhra Pradesh Chief Minister Naidu places on Singapore's continued interest in his state was seen when he himself conducted the briefing for Minister Yeo and the Singapore delegation (*Business Times*, Singapore, 1 December 2000). While Singapore company JTCI had shown interest in acquiring a stake in HiTec City, majority owner Larsen and Toubro Ltd (L & T) of India was not keen to dilute its 89 percent stake in the project (*India Business Insight*, 19 August 2000). However, L & T and JTCI of Singapore managed to work out a collaboration package for the third phase of HiTec City (*Business Line*, 27 June 2001).

Another Singapore firm specializing in the construction of High Tech Parks called Ascendas Private Limited had also managed to form a joint venture with one of L & T's subsidiary firms, L & T Infocity Limited (LTIL), to develop a new IT block at HiTec City (*Press Trust of India*, 18 October 2001). The new block has been named as Cyber Pearl and it is in the third phase of development of major facilities in HiTec City (*Straits Times*, 9 January 2003). The project was expected to be completed in the first quarter of 2004. The project land area has been fixed at 6 acres and to create 500,000 square feet of space (*Times of India*, 9 January 2003). A Memorandum of Understanding (MOU) was signed by LTIL Director A. Ramakrishna and Ascendas' president and CEO Chong Siak Ching in October 2001. Construction begun in early 2002 and Ascendas provided expertise in architectural concept design as well as development and project management (*India Business Insight*, 29 October 2001). L & T's expertise will be in detailed architectural and engineering design and construction. The completed IT complex would be offering 500,000 square feet of business space on a five acre plot at HiTec City. The IT complex would also be equipped with uninterrupted power and water supply, telecommunication and fiber optic networks to ensure maximum connectivity at all times (*Press Trust of India*, 18 October 2001). The LTIL and Ascendas joint venture in the third phase has been renamed Cyber Pearl. Singapore's President Nathan, on his visit to HiTec City, has been impressed with the development of the state's infrastructure (*Straits Times*, 9 January 2003).

### *Andhra Pradesh–State Housing*

The Andhra Pradesh Housing Board (APHB) was established in 1960 with the objective to provide housing to those in need at an affordable price and to recover the cost of construction from the sale of these housing units. The timely establishment of the APHB is crucial to accommodating the swelling ranks of Hyderabad's (state capital) population. The population of Hyderabad has increased from 1.13 million in 1951 to 4.28 million in 1991. To date, the APHB has constructed over 69,000 houses in different categories. The residential construction industry has good potential for growth in Andhra Pradesh because of the projected demand for 1.5 million houses spread over the twin cities of Hyderabad and Secunderabad as well as other major towns (*Business Line*, 1 July 2002). The Andhra Pradesh state government is focusing on the needs of lower income families because the upper and middle income market will be attractive to other interest groups. New projects to be undertaken by the APHB include the Township at Pocharam, infrastructure facilities and development of privately held lands at Warangal. The wholly owned subsidiary of the Singapore Housing and Development Board (HDB) called Cesma International has won a SGD $1 billion contract to initiate master planning at the housing site at Pocharam in Andhra Pradesh state, as well as designing recreational and other facilities. The proposed integrated township is located on the Hyderabad-Warangal highway and most of the apartments to be developed have been sold (*Business Line*, 1 July 2002). Subsequently, Cesma International won an SGD $70 billion contract to build the first phase of the township project consisting of 1,600 homes to accommodate an estimated 60,000 residents.[19] Cesma has also invited other Singapore to join the project. According to Cesma President Low Seng Poh, "We believe this is a good way for Cesma International to help other Singapore companies to penetrate the Indian market" (*Business Times*, Singapore, 13 February 2003).

The construction of the US $40 million "Singapore-style" self contained township at Pocharam will be the first of its kind in Andhra Pradesh. The Pocharam housing complex will have a cluster of one-plus 12-story and one-plus four-story apartments and is located 18 kilometers from Hyderabad. The APHB has acquired 723 acres for the construction of the housing complex and the first phase will involve the construction of 1,600 flats on 50 acres of land. These flats will consist of three and two bedroom flats of 1,400 and 1,100 square feet, respectively. The three bedroom flats will costs approximately US $20,000, while the two bedroom US $16,000. The remainder of the acquired land belonging to APHB will be utilized for later phases of the township project (*The Hindu*, 11 April 2002). Chief Minister Chandrababu Naidu has also hinted that township projects are likely to be connected by a metro train service to Hyderabad in the near future. Table 3 indicates that the level of support for the Pocharam township project was strong across the board and among the various players connected to the project. The Pocharam township project has caused great interest in the housing market because of its space saving features and infrastructure facilities and all the flats have been sold.

The facilities at the Pocharam township project will include schools, shopping complexes, places of worship, flower gardens, playground, swimming pools, club houses as well as wide roads. It was reported that similar townships are being planned in other areas around Hyderabad such as Gachchibowli, Kukatpalli and Lakshmipuram. Chief Minister Chandrababu Naidu has said that he would like Singapore to replicate its business environment at Pocharam. Naidu also believed that Cesma International's expertise and experience would help in completing the project in one and a half years (*The Hindu*, 13 February 2003). The Pocharam project has been endorsed by the political leaders from India and Singapore. For Singapore companies in particular, it represents a test case whether it will be able to undertake large residential projects in India.

Apart from the huge demand for residential units, the demand for office space and facilities to accommodate India's growing services industry is also fuelling the construction boom in Indian cities and rural



TABLE 3. Levels of Interest Among Stakeholders of Pocharam Township Project

| **Interested Parties** | **Township Endorsement** |
|---|---|
| Singapore Government | Strong |
| Indian Government | Strong |
| Andhra Pradesh State Government | Strong |
| APHB | Strong |
| Cesma International | Strong |
| Middle Class Home Buyers | Strong |

areas. The average annual rent for a 100 person office in India is approximately US $100,000, about a fifth of the cost for an equivalent set up in Singapore (*Business Times*, Singapore, 5 March 2004). A survey by property consultants Jones Lang Lasalle predicted that MNCs will decrease remand for office space in Hong Kong, Tokyo and Singapore but the demand for office space will grow by six percent in Indian cities Mumbai and Delhi. In 2004, nearly 11 million square feet of office space is expected to be taken up in India's five largest cities, nearly twice the demand of 6.4 million square feet in 2002 (*Business Times*, Singapore, 5 March 2004). At the cities' suburbs and rural areas of India, the demand for office space has seen property and land prices increasing. Farming lands are making way for factories and offices complexes as India cashes in on its status as an outsourcing hub for the world's MNCs (*Business Times*, Singapore, 1 March 2004).

## *CONCLUSION*

The Singapore government needs to regionalize Singapore companies especially the GLCs. However, GLCs such as Cesma International and other Singapore construction companies' faces strong challenges from rival construction firms such as those from Malaysia who have experience in undertaking large projects such as building highways. The state capitalism approach as manifested by the ownership of majority shares by the Singapore government in various GLCs has caused problems because of suspicions that foreign investments and or joint ventures by Singapore GLCs are tantamount to a takeover by the Singapore government. Using a consortium or cluster approach and joint ventures with host country companies might placate nationalist sentiments. In non-sensitive areas such as residential development where there is critical shortage of dwelling units, the investments made by Singapore GLCs appears non-threatening to various Indian interest groups. Singapore GLCs also face fierce competition from foreign competitors. For example, IJM Corporation, a major construction company based in Malaysia, is involved in a joint venture with the APHB to develop a 25-acre site located at Kukatpally around Hyderabad. The IJM Corporation is also involved in the construction of the Mumbai-Pune expressway and the Chennai bypass (*Business Line*, 21 May 2002). However, Cesma International has accumulated more than 40 years experience in building mass public housing. Cesma's connection to Singapore's larger brand image of being efficient, trustworthy and able to complete projects within given deadlines provides it with a slight competitive edge against other potential rivals.

The challenge of working in a democratic system in India with regular elections is very time consuming and politically volatile. The state governments of Chandrababu Naidu (Andhra Pradesh) and S.M. Krishna (Karnataka) have both been replaced in the general elections of June 2004. The new federal coalition government of India led by the Congress Party is leaning towards more populist policies that favor the rural and poor voters of India. In a move towards a better understanding of the Indian market, GIC has established a wholly owned subsidiary in India called India International Insurance Private Limited (IIIPL). The IIIPL will be responsible for routing GIC's investments for developing an integrated model township in the southern state of Tamil Nadu (*Business Line*, 6 May 2003). The Indian partners in the joint venture will be B.P. Ventures Private Limited. The township will be built on the Chennai Information Technology (IT) Corridor and involve the development of at least 2000 residential units spread over 100 acres of land (*Business Line*, 6 May 2003). Jurong Town Corporation (JTC), a statutory board in Singapore that has built industrial, science and high-technology parks in Singapore, has also established a subsidiary in India. The subsidiary called JTC Consultants (India) has linked up with Indian developer Kingston Properties, a subsidiary of Oberoi Constructions, to develop a shopping mall at Goregaon in Mumbai, in the state of Maharshtra in Western India.

Cesma International has also shown interest in other Indian states such as West Bengal. The government of West Bengal has proposed to develop the state's first 50-storied building in the state capital of Kolkata (*Business Line*, 20 November 2002). The proposed building, to be known as the "Gateway to Kolkata," will feature shopping malls, food courts and multiplexes. Cesma International will be responsible for the project's master planning, its architectural design, structural engineering and quality surveying *(Business Line*, 20 November 2002). The local partners involved with Cesma in the consortium to develop the proposed project are Srishti Infrastructure Development and Srei International (*Business Line*, 20 November 2002). Singapore companies, through exploring of suitable investment opportunities in specific states in India, have begun to show productive results as well as the ability to cooperate with Indian firms in joint ventures. Cesma International has led the way for Singapore companies and the clustering strategy to establish a consortium to bid for projects seems a good approach to impress potential clients. Singapore companies have to regionalize to survive but their capabilities to manage large and complex projects as well as a good brand name in India could give them an edge over their rivals. India too stands to gain because the Singapore GLCs backed by Temasek and the GIC have the necessary financial muscle to undertake various projects in India.

## NOTES

1. For GLCs in Singapore, they are defined as companies which the government owns 20 percent or more in equity.

2. The tradition of state led policies, programmes and performance of developing country regimes were often criticized because of bureaucratic inefficiencies, diminishing performance of public enterprises and declining confidence in government institutions. M. Shamsul Haque, "Privatization in Developing Countries: Formal Causes, Critical Reasons, and Adverse Impacts," pp. 217-218, in *Privatization or Public Enterprise Reform*? Ali Farazmand (Ed), Greenwood Press, Westport, US, 2001.

3. There are three major positions of state capitalism in the developing world. First, under global imperial hegemony, no economy could pursue an independent development policy without experiencing a mass based socialist revolution. Second, a third path called non-capitalist (neither capitalist nor socialist) is possible. Third, an independent economic path becomes possible during imperial decline and a world wide crisis. Berch Berberoglu, The Political Economy of Development, State University of New York Press, Albany, 1992.

4. An economic system that is primarily capitalistic but there is some degree of government ownership of the means of production. "This condition is often associated with conditions of recession and industrial alignment, forcing the government to use state ownership of firms to ensure national participation in internationally competitive industries," Jean Kirk Laux and Maureen Appel Molot, *State Capitalism: Public Enterprise in Canada*, Cornell University Press, Ithca and London, 1988, p. 24.

5. Developmental states are characterized by their organizational capabilities to formulate and implement strategies that target domestic firms to build their international competitiveness. Stefanie Ann Lenway and Thomas P. Murtha, "The State as Strategist in International Business Research," in *Journal of International Business Studies*, Third Quarter 1994.

6. Berch Berberoglu, *The Political Economy of Development*, State University of New York Press, Albany, 1992, pp. 26-27.

7. Richard J. Zeckhauser and Murray Horn, "The Control and Performance of State-Owned Enterprises," in MacAvoy, Stanbuty, Yarrow and Zeckhauser, *Privatization and State-Owned Enterprises*, Kluwer, Boston, 1989, pp. 12-13.

8. Pp. 220-221.

9. Speech by Madam Ho Ching, Executive Director Temasek Holdings, Institute of Policy Studies, Singapore, 12 February 2004, reproduced in the *Straits Times*, Singapore, 13 February 2004.

10. Ibid.

11. "Recommendations on Government in Business," Entrepreneurship and Internationalization Subcommittee, Economic Review Committee, Ministry of Trade and Industry, Singapore, 30 May 2002.

12. Ibid.
13. Ibid.
14. The ERC was established by the Singapore government in December 2001 to comprehensively review the current policies and propose appropriate strategies to further growth and development of the Singapore economy. Letter by the Deputy Prime Minister and Minister for Finance of Singapore, DPL Lee Hsien Loong, to the Prime Minister of Singapore, Goh Chok Tong.
15. The Consuming class is the group that interests middle range property developers. This Consuming class is reported to have an annual income of US $1,300 to US $6,000. The majority of them own a scooter, color TV, electric iron, blender, sewing machine and refrigerators. However, the most coveted possession is a house, preferably one made of brick and cement. The Consuming class is expected to reach 450 million people by 2010. Due to the segmented nature of the Indian housing market, this paper will focus on the expanding middle class and how state governments like those in Andhra Pradesh are trying to provide housing for them.
16. Some of the companies in the delegation included Keppel Land, National Parks Board, CPG Consultants, Andrew Tan Architects, Wow Architects and Jurong Consultants. *Business Times*, Singapore, 4 September 2003.
17. A REIT is a company that owns and operates income producing real estate such as apartments, shopping centers, offices, hotels and warehouses.
18. HiTec City is a 60 hectare business park aimed at attracting investment from IT companies. Phase one of the park, which yielded 550,000 square feet of floor space, has been fully taken up by leading global software companies like Microsoft, IBM, Oracle and Toshiba. Eugene Low, "Andhra Pradesh high-tech chief exec makes things happen," *Business Times*, Singapore, 21 January 2000.
19. The Pocharam township project is situated on a three million square meter site. The first phase on 20 hectares of land is projected to yield 2,080 housing units. Loh, H.Y., *Business Times*, Singapore, 13 February 2003.

## REFERENCES

APHB venture with Singapore, Malaysian Cos–Two townships coming up near Hyderabad, (2002, May 21), *Business Line*, India.

Ascendas signs JV with LTIL to develop IT complex, (2001, October 18), *Press Trust of India*.

Balassa, B. (1989), *New Directions in the World Economy*, Hong Kong, MacMillan.

Bardhan, A.D., Datta, R., Edelstein, R.H. & Kim, L.S. (2003), A tale of two sectors: Upward mobility and the private housing market in Singapore, *Journal of Housing Economics*, 12, 83-105.

Barrett, G. (2004, January 31), Australia, India v China: The next great economic rivals, *The Age*, Australia.

Bardhan, A.D., Datta, R., Edelstein, R.H. & Kim, L.S. (2003), A tale of two sectors: Upward mobility and the private housing market in Singapore, *Journal of Housing Economics*, 12, 83-105.

Bosswell, T & Chase-Dunn, C. (2000), *The Spiral of Capitalism and Socialism*, Colorado, Lynne Rienner Publishers.

Building industry shrinks by another 11%, (2002, November 19), *Straits Times*, Singapore.

Cavusgil, S.T. & Ghauri, P.N. (1990), *Doing Business in Developing Countries*, London and New York, Routledge.

*Contribution of Government-Linked Companies to Gross Domestic Product*, (2001, March), Department of Statistics, Singapore.

Demand-supply mismatch, (2002, July 1), *Business Line*, India.

Deshpande, G. & Das, M. (2003), India Real Estate: A Radical Shift. *Global Real Estate Now*, Spring, 20-23.

Fang, F., Sun., Q. & Tong, W.H.S. (2004), "Do government-linked companies under perform?" *Journal of Banking and Finance*, 28, 2461-2492.

Farms make way for outsourcing firms in Bangalore, (2004, March 1), *Business Times*, Singapore.

Fernandes, L. (2000), Restructuring the New Middle Class in Liberalizing India. *Comparative Studies of South Asia, Africa and the Middle East*, XX, (1 & 2).

Field, B. (1987), Public housing in Singapore, *Land Use Policy*, (April), 147-156.

Foo, T.S. (2001), Planning and design of Tampines, as award-winning high-rise, high-density township in Singapore, *Cities*, 18 (1), 33-42.

Foreign firms account for 60 percent of Singapore's corporate assets, *Agence France Presse*, 22 March 2001.

GIC steps up its China exposure, (2003, March 3), *Business Times*, Singapore.

GIC to invest in Chennai township via Singapore arm, (2003, May 6), *Business Line*, India.

HDB unit Cesma bags $70m Indian township project, (2003, February 13), *Business Times*, Singapore.

Helping hand for three hard-hit sectors, (2003, August 30), *Straits Times*, Singapore.

Heracleous, L., *Privatisation, global trends and implications of the Singapore experience*, Working paper, School of Business Studies, Trinity College, University of Dublin, Dublin, Ireland.

Ho Ching lifts veil over Temasek–partly, (2004, February 13), *Straits Times*, Singapore.

Hoge, J.F., (2004), A Global Power Shift in the Making, *Foreign Affairs*, July 21.

How Large is India's Middle Class? (2002, December 5), *The Financial Express*, India.

Hubbard, R. (2002, August 28), No big Singapore Inc sale as it focuses overseas, *Reuters*.

India's township projects offer lucrative openings (2003, March 17), *Straits Times*, Singapore.

India opens up housing sector, (1998, June 23), *Business Times*, Singapore.

India's property rules deter foreigners, (2003, September 12), *Business Times*, Singapore.

Jain, A.K. Viewpoint: Making planning responsive to, and compatible with, reforms, *Cities*, 20 (2), 143-145.

JTC International to step up India operations, (2004, January 2004), *Financial Express*, India.

Kuada, J. & Sorensen, O.J. (2000), *Internationalization of Companies from Developing Countries*, New York, International Business Press.
Kumar, O. (1991), Delhi Housing and Planning Experiences, *Building and Environment*, 26 (3), 265-268.
L & T Infocity, Ascendas to Develop Hitec City Phase-III, (2001, October 29), *India Business Insight*.
Laux, J.K. & Molot, M.A. (1988), *State Capitalism: Public Enterprise in Canada*, London, Cornell University Press and Ithaca.
Laying the finance foundation, (2002, October 27), *Business Line*, India.
Legewie, J. & Ohle, H.M. (2000) *Corporate Strategies for Southeast Asia After the Crisis*, Hampshire, New York, Palgrave.
Lim, L. (2002, August 27), Parliament to debate role of GLCs, *Straits Times*, Singapore.
Lim, W.S.W. (1988), A Tale of the Unexpected. The Singapore Housing Experience, *Habitat International*, 12 (2), 27-34.
Little S'pore in India, (2003, September 12), *Straits Times*, Singapore.
Loo, L.S., Shi, M.Y. & Sun S.H. (2003), Public housing and ethnic integration in Singapore, *Habitat International*, 27, 293-307.
Looking into the future of GLCs, (2002, July 18), *Straits Times*, Singapore.
Low, I. Temasek sharpens its focus, *Straits Times*, Singapore, 4 July 2002.
MacAvoy, P.W, Stanbury, W.T., Yarrow, G. & Zeckhauser, R.J. (1989), *Privatization and State-Owned Enterprises*, Boston, Kluwer Academic Publishers.
Mah leads India mission for construction jobs, (2003, September 29), *Business Times*, Singapore.
Mega Payoffs–And Some Pain, (2003, January 29), *Business Times*, Singapore.
Mills-Tettey, R. (1988), South to South Learning Experiences: Popular Housing Problems in Nigeria and India, *Habitat International*, 12 (3), 53-63.
Misra, H.N. (1988), Popular settlements in the city of Allahabad. Findings from three case studies, *Cities*, May, 5 (2), 163-183.
MPs hit Temasek charter as unclear on disinvestment plans, (2002, August 28), *Agence France Presse*.
Moore, K. & Lewis, D. (1999), *Birth of the Multinational. 2000 Years of Ancient Business History–From Ashur to Augustus*, Denmark, Copenhagen Business School Press.
GIC to invest in Chennai township via Singapore arm, (2003, May 6), *Business Line*, India.
Naidu lays stone for Singapore-class township, (2003, February 13), *The Hindu*, India.
Older HDB staff say Special Resignation Scheme is generous and reasonable, (2003, February 26) *Channel New Asia*, Singapore.
Okposin, S.B. (1999), *The Extent of Singapore's Investments Abroad*, Aldershot, UK, Ashgate Publishers.
Older HDB staff say Special Resignation Scheme is generous and reasonable, (2003, February 26), *Channel New Asia*, Singapore.
Ooi, G.L. (1994), National identity, public housing and conservation in Singapore, *Habitat International*, 18 (2), 71-80.

Pugh, C. (1992), Land policies and low-income housing in developing countries. A review with reference to Kenya and India, *Land Use Policy*, 19 (1), January, 47-63.

Putnam, P.D. (1988), Diplomacy and domestic politics, *International Organisation*, Summer, 42 (3).

Qu Qiang (2003), Corporate governance and state-owned shares in China listed companies, *Journal of Asian Economics*, 14, 771-783.

Rajan, R. (2003, June), Emergence of China as an Economic Power: What Does it Imply for Southeast Asia? Working paper, School of Economics, University of Adelaide, Australia.

Ramirez, C.D., and Tan, L.H. Singapore, Inc. Versus the Private Sector: Are Government-Linked Companies Different? IMF Working Paper, WP/03/156, IMF Institute, July 2003.

Richardson, M. Singapore Privatization Push Expected, *International Herald Tribune*, 30 January 2004.

Sanyal, B. & Mukhija, V. Institutional Pluralism and Housing Delivery: A Case of Unforeseen Conflicts in Mumbai, India, *World Development*, 29 (12), 2043-2057.

Saywell, T. (2003, July 10), Singapore's housing glut, *Far Eastern Economic Review*.

Schein, E.H. *Strategic Pragmatism. The Culture of Singapore's Economic Development Board*, Toppan Press, Singapore, 1996.

Shafaeddin, S.M. (2004), Is China's accession to WTO threatening exports of developing countries? *China Economic Review*, 15 (2), 109-144.

Shameen, A. (2000, July 16), And then there were two, The government allows a bit of media rivalry, *Asiaweek*, 29 (3).

Sim, L.L. (1989), Residential land use policy condominium housing development, *Land Use Policy*, 6 (2), April, 121-131.

Singapore GLCs Casting Shadows, (2003, May 22), *South China Morning Post*.

Singapore's regionalization challenge, (2002, July 27), *Asia Times*.

Singapore firm keen on building Kolkata tower, (2002, November 20), *Business Line*, India.

Singapore offers expertise on township living, (2002, October 10), *Business Line*, India.

Singapore contractors head for India for businesses, (2003, September 3), *Channel NewsAsia*, Singapore.

Singapore construction firms for tie-up, (2002, October 10), *The Hindu*, India.

Singapore President praises state for IT progress, (2003, January 9), *Times of India*.

Sivam, A. Housing supply in Delhi, *Cities*, Vol. 20, No. 2, 2003, pp. 135-141.

Sivam, A., Evans, D., King, R. & Young, D. (2001), An approach to improved housing delivery in large cities of less developed countries, *Habitat International*, 25, 99-113.

*Speech by Mr. Mah Bow Tan, Singapore Minister for National Development*, (2003, August 13), National Day Observance Ceremony, Singapore, Ministry of Information and the Arts, Singapore.

*Speech by Mr. Mah Bow Tan, Singapore Minister for National Development*, (2003 September 8), New Delhi, India.

S'pore ready to work with Andhra Pradesh, (2000, December 1), *Business Times*, Singapore.

S'pore can team up with India's IT city: President, (2003, January 9), *Straits Times*, Singapore.

S'pore firm uneasy over Hanoi JV, (2003, March 3), *Business Times*, Singapore.

S'pore offers help with India's housing, (2003, September 9), *Straits Times*, Singapore.

Staff Reporter, Naidu lays stone for Singapore-class township, *The Hindu*, India, 13 February 2003.

State-linked firms outperform private sector: Report, (2002, September 3), *Agence France Presse*.

Sukthankar, D.M. (1991), Housing: A National Overview, *Building and Environment*, 26 (3), 235-240.

Sundaram, P.S.A. (1988), An institutional framework for housing finance in India, *Habitat International*, 12 (4), 21-27.

Temasek set to play more aggressive, (2002, June 27), *Straits Times*, Singapore.

Tiwari, P. (2001), Energy Efficiency and building construction in India, *Building and Environment*, 36, 1127-1135.

Tiwari, P. and Parikh, J. (2000), Housing paradoxes in India: Is there a solution? *Building and Environment*, 35, 59-75.

Temasek-linked firms face bigger risks as they expand and Govt reduces support, (2003, October 8), *Channel NewsAsia*, Singapore.

Temasek Holdings Acquires 5.2% Stake in ICICI Bank, (2004, January 2004), *Hindustan Times*, India.

Temasek Holdings and Standard Chartered Private Equity Launch USD 100 Million Merlion India Fund, (2003, August 28), *Temasek Holdings Press Release*, Singapore.

The Asian growth miracle, (2003, November 14), *Business Times*, Singapore.

Wanted: pro-active housing policy, (2002, July 25), *The Hindu*, India.

Watanabe, M., Holding company risk in China: A final step of state-owned enterprises reform and an emerging problem of corporate governance, *China Economic Review*, Vol. 13, 2002, pp. 373-381.

Why Singapore Is Unloading an Icon, (2000, November 20), *Businessweek*.

Wong, S.J., What's driving India's bull? (2003, October 30), *Business Times*, Singapore.

Wu, Y.S. (1994), *Comparative Economic Tranformations, Mainland China, the Soviet Union and Taiwan*, California, Stanford University Press.

Wong, T.C. & Yap, A. (2003), From universal public housing to meeting the increasing aspiration for private housing in Singapore. *Habitat International*, 23, 361-380.

Work on Singapore–style township at Ghatkesar to start from June, (2002, April 11), *The Hindu*, India.

Yeung, W.C. (2002), Transnational Enterpreneurship and Chinese Business Networks, in Menkhoff, T. & Gerke, S. (eds) *Chinese Entrepreneurship and Asian Business Networks*, London, Routledge Curzon, 184-216.

Yuen, B., Public Housing-Led Recreation Development in Singapore, *Habitat International*, 19 (3), 239-252.

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