Antipode 31:3, 1999, pp. 245–273
ISSN 0066-4812

REGULATING INVESTMENT ABROAD: THE POLITICAL ECONOMY OF THE REGIONALIZATION OF SINGAPOREAN FIRMS

Henry Wai-chung Yeung*

Introduction

Various versions of the regulationist perspective have recently received serious attention in the geographic literature addressing the processes of growth, crisis and reproduction of the contemporary capitalist space-economy. It is primarily a macro-economic method of analysis concerned with the dynamic "institutional fix"[1] needed to contain the inherent contradictions in capitalist societies. By focusing on the process of capital accumulation and the organization of institutions and their regulatory practices, the regulationist perspective has shed light on many seemingly intractable problems in our understanding of capitalism and its spatial development (Aglietta, 1976; Lipietz, 1987; Boyer, 1990). The regulationist perspective is not without its critics, however (e.g., Graham, 1992; Marden, 1992; Tickell and Peck, 1992; Walker, 1995; Barnes, 1996; Webber, 1998).[2]

In particular, regulation theory has largely been used to explain developments within advanced industrialized countries at the expense of the dynamics of peripheral countries.[3] When applied to the latter, concepts such as Fordism are problematic, because they refer to the simultaneous existence of a mass production system and a long-term social contract governing the wage relation. This combination may have occurred in Europe and North America, but it does not arise often outside the core of

*Department of Geography, National University of Singapore, Singapore; e-mail: geoywc@nus.edu.sg

Published by Blackwell Publishers, 350 Main Street, Malden, MA 02148, USA, and 108 Cowley Road, Oxford, OX4 1JF, UK.

global capitalism. The strong role of the state in peripheral industrialization further compromises the parallel to a Fordist regime of accumulation. This ambiguity has led Boyer to state that "concepts such as 'bloody Taylorism' or 'peripheral Fordism' are more dangerous than fruitful. Just because Ford builds cars in Brazil, does that allow the establishment of parallels between the Brazilian and American regimes of accumulation? A closer look will lead, on the contrary, to the characterization of the mode of development of the newly industrialized countries as quite distinctive" (1990:xii). Lipietz's (1987) construction of "peripheral Fordism" reflects a simplistic dual conception of the global economy (center vs. periphery, global vs. national, developed vs. developing economies) (Sum, 1998). This conception defines the "periphery" from the viewpoint of the "center" and its role in structuring the dynamic of the global system as a whole. Such Eurocentric use of Fordism ignores the diversity of capitalist development in various national territories.

To understand the distinctiveness of the processes of growth, crisis, and reproduction in peripheral countries, we need to consider different forms of capital accumulation, their internal contradictions, and their connection to wider political-economic transformations. A modified regulationist perspective provides some methodological tools to accomplish such a task. The key issue involves how best to use the regulationist perspective to understand multiple developmental trajectories, rather than fitting countries' diverse economic histories into the empirical confines of earlier regulationist studies of the U.S. and Europe. One may accept the key categories of regulation theory in a modified and expanded form. While the regulationists have focused on the nature of the capital-wage labor nexus and the type of intercapitalist competition, less attention has been given to three other aspects of the network of institutions composing the mode of regulation: the character of monetary and credit relationships; the manner of articulation of national firms into the global economy; and the forms of the state's intervention into the economy. The latter two aspects serve particularly important roles in the analysis of the growth, crises and reproduction of an open, export-oriented, city-state economy such as Singapore's.[4]

This paper aims to make a modest contribution to regulation theory by examining the forms and processes of the outward movement of transnational corporations and foreign direct investment from an Asian newly industrialized economy (NIE), Singapore.[5] In Singapore, tensions embedded in the dynamic coupling of an export-led regime of capital accumulation with a mode of social regulation over the past three decades spurred the search for a new set of social and institutional fixes by the early 1990s. These contradictions emerged from the island economy's heavy dependence on foreign capital, the domestic economy's domination by state-owned enterprises, and the underdevelopment of indigenous entrepreneurship. If not resolved, these contradictions could lead to major

crises in Singapore's capitalist development trajectory, as they did after the impact of external shocks during the 1985 recession. They may also place upper limits on the reproduction and accumulation of domestic private capital in Singapore.

The regionalization drive, in which Singaporean firms are encouraged by the state to take their operations across borders to other countries within the Asia Pacific region, represents one of the most politically acceptable solutions to the potential crisis of accumulation in recent years, hailed as an institutional fix to overcome domestic constraints on capital accumulation. Through regionalization, Singaporean firms hope to maintain healthy returns on investment from abroad, thereby transforming Singapore's regime of accumulation from an export-led regime to a truly internationalized one based on the transnational operations of domestic firms. Through its various mechanisms of regulation the state plays an active and direct role in this regionalization process. These mechanisms include labor market regulation and the state-led establishment of institutions to support the regionalization process. Together, the social contradictions of an authoritarian regime, accumulation crises, and the local regulation of investment in Singapore explain the regionalization of Singaporean firms.

The discussion begins by developing an institutional approach to explaining the political economy of international business activities. The paper then deploys this approach to analyze Singapore's regionalization process. It offers a broad picture of the historical geography of outward investment from Singapore, followed by a detailed examination of the prevailing regimes of accumulation in Singapore and finally by an analysis of the social regulation of its regionalization process.

Economic Crisis and Institutional Fixes: The Regulation of International Investment

Conventional international business studies view national regulations as a key obstacle to efficient allocation of resources across national boundaries (Dunning, 1988, 1993, 1997; Eden and Potter, 1993; Caves, 1996; UNCTAD, 1996). Such regulations exist in various forms such as trade barriers, local restrictions on equity ownership and sectoral choice, and protectionist industrial policies. Defined traditionally, regulations are negative externalities that must be internalized in order for the market to function efficiently (Coase, 1937; Williamson, 1975, 1985). International business scholars argue that national firms try to overcome externalities arising from host country regulations by internalizing cross-border activities. When national firms internalize these regulations by establishing and controlling their own operations in host countries, they are transformed

into transnational corporations. In other words, regulation is a key *raison d'être* for transnational corporations (Buckley and Casson, 1991).

This neoclassical view of regulation overlooks other important modes of regulation such as social norms, non-state institutions, and local political systems. It also misses the impact of *home* country conditions on the internationalization of capital embodied in transnational firms. The regulationist perspective, by contrast, defines a *mode of social regulation* as a body of internalized rules, institutions, organizational forms, social networks and social processes to materialize and to sustain the regime of accumulation. It is concerned with the economy in its integral sense, i.e., the social and institutional context in which expanded social reproduction and capital accumulation occur. The mode of social regulation therefore "involves all the mechanisms which adjust the contradictory and conflictive behavior of individuals to the collective principles of the regime of accumulation" (Lipietz, 1992:2). It allows a dynamic adaptation of production and demand, and guides and stabilizes the process of capital accumulation (Dunford, 1990). The notion of the mode of social regulation implies that capital accumulation is not an automatic process, but that conditions for capital accumulation are socially secured, which in turn requires the state and politics to play a leading role. The conditions for accumulation can therefore fail. In this sense, Joseph argues that "the specific features of a crisis are the product of a crisis in the *social condition*s necessary to . . . overcome the inherent laws of capital" (1998:91).

The need of the economy does not functionally determine the mode of social regulation, however (Jessop, 1990, 1992; Moulaert and Swyngedouw, 1992). Regimes of accumulation and modes of social regulation are the "outcomes of the history of human struggles: outcomes that have succeeded because they ensured some regularity and permanence in social reproduction" (Lipietz, 1986:19). These institutional and social forms "emerge only as the outcome of conflicting tendencies of progressive acts and regressive setbacks . . . [and as] a social form resulting spontaneously and not consciously from conflicting social actions" (Altvater, 1992:22). The establishment of a harmonious relationship between regimes of accumulation and modes of social regulation should be understood as a "chance discovery" rather than a functional one-to-one correspondence (Lipietz, 1987; Jessop, 1990; Peck, 1996).

A theoretical position can be developed in opposition to the neoclassical model of transnational corporations which conceptualizes the internationalization of transnational corporations as a direct outcome of contradictions in the processes of capital accumulation in home countries. In the regulationist view, economic crises in home countries arise because of contradictions between production and consumption (underconsumption), and sometimes from class struggle (wage-profit squeeze). Over time, accumulation tends to break down when decreasing consumption and declining labor productivity can no longer sustain the

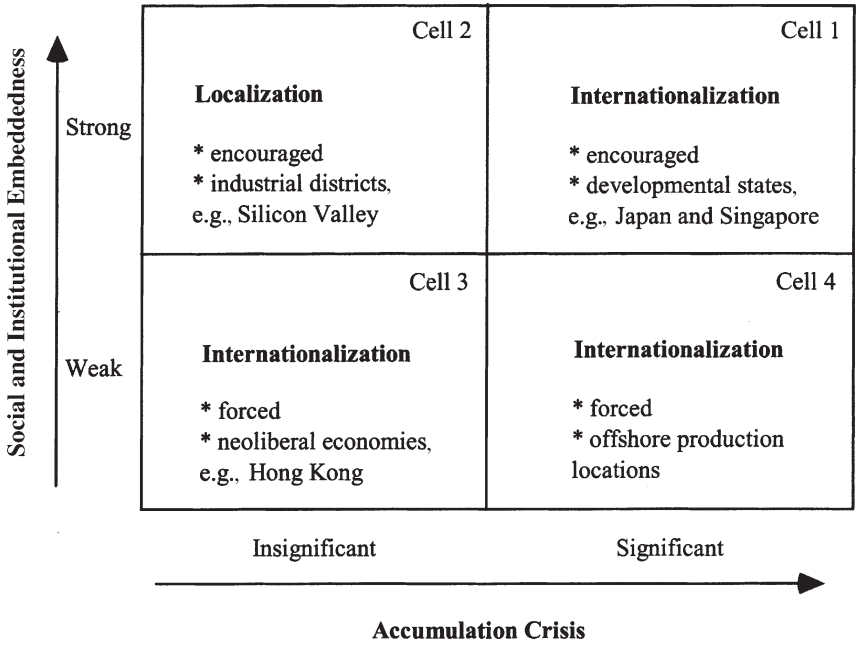

Figure 1 An Institutional Perspective on the Internationalization of National Firms.

continuous self-expansion of capital. Under such circumstances, national firms face decreasing rates of return. Internationalization provides one resolution to such crises. This point has been emphasized in much of the radical work on the internationalization of capital (e.g., Hymer, 1970, 1972; Murray, 1971; Palloix, 1975, 1977; Fröbel et al., 1980). Nevertheless, this view universalizes the experience of American transnationals and overlooks the ways in which modes of local regulation can shape local differences in the internationalization of capital (Yeung, 1998a).

Figure 1 provides theoretical constructions of several social formations and possibilities of internationalization, depending on the extent of regulatory crisis and the nature of social/institutional embeddedness. These topographical constructs are theoretical ideal-types and serve as heuristic devices, rather than empirically proven categories, for analyzing the internationalization of capital. The regulationist perspective's main contribution here comprises the combination of an analysis of capitalist accumulation crisis with an analysis of the role of institutions in providing an appropriate mode of regulation to promote *or* to discourage the internationalization of *domestic* firms. In other words, we cannot fully understand the internationalizing propensity of domestic firms by referring only to their local embeddedness or agglomeration tendencies. Equally important, these firms internationalize to overcome accumulation crises

in their domestic economies. Different empirical outcomes of internationalization thus depend on different configurations both of accumulation crises and of institutional fixes. The geographic literature on industrial districts and firm networks often neglects this important point.

As shown in Cell 1 of Figure 1, when national firms face severe crises in domestic regimes of accumulation and the local modes of regulation favor internationalization (e.g., pro-business and open-minded economic management or strong institutional support), the firms may be explicitly encouraged by these regulatory practices to operate abroad. This differs from the traditional neoclassical interpretation of international production in that the home country's mode of regulation, not that of the host country, drives national firms into international production. Local modes of social regulation act as an institutional fix for domestic regimes of accumulation by providing favorable support of national firms' transnational operations. This support can take a number of forms, such as improvement of the mobility of expatriate labor, financial backing from major domestic financial institutions, fiscal incentives from state institutions, and the transfer of social and business networks. One can see this in the case of the globalization of Japanese firms (Johnson, 1982; Wade, 1990; Whitley, 1992; Fukuyama, 1995). In industries such as automobile manufacturing, Japanese firms go so far as to transfer the entire supplier network to reproduce their production chains abroad (Florida and Kenney, 1991; Kenney and Florida, 1993; Elger and Smith, 1994). Similar institutional influences on the internationalization of national firms can be observed in the case of Singapore.

Sometimes national firms facing crises of domestic accumulation may choose *not* to take their operations across national boundaries. This happens when their respective modes of regulation provide an institutional fix to stabilize the crises (Cell 2, Fig. 1). For example, a national firm may experience decreasing domestic market share and/or high costs of production, but may not transnationalize its production because its production network is deeply embedded in local social and institutional practices and their "untraded interdependencies" (Henry et al., 1996; Storper, 1997). Where the local context has enough "institutional thickness" (Amin and Thrift, 1994), domestic firms become well rooted. So do their competitive advantages, including local knowledge of products, markets, and business networks (Hu, 1992, 1995; Yeung, 1998b). Local modes of regulation may thus influence the global reach of national firms.

On the other hand, the geographical patterns will be affected when the local mode of regulation has been uncoupled from national firms. This situation occurs when national firms are weakly embedded in local modes of regulation and institutional practices, causing a major "regulatory deficit" (Cells 3 and 4, Fig. 1).[6] Firms employing labor-intensive modes of production, relying on unskilled labor easily found in many localities, find this particularly relevant. In some neoliberal economies (Cell 3, Fig. 1),

national firms are compelled to internationalize not because of the crisis in the local accumulation regime but because of an unfavorable regulatory deficit. For example, the internationalization of Hong Kong's textiles and garments firms during the late 1960s and early 1970s arose from the neoliberal economic strategy of the colonial government. Through its passive industrial policy and high land-price policy—which had explicitly favored financial capitalists—the state indirectly engineered a massive exodus of labor-intensive industries from Hong Kong (Yeung, 1996, 1998c, 1999b). Alternatively, when a major crisis of accumulation is set in motion, disembedded firms are likely to be forced by competitive pressures to unplug themselves from localities and search for other low-cost locations (Cell 4, Fig. 1). The frequent relocation of low-cost electronics assembly plants and their well-known lack of allegiance to offshore production localities demonstrates this phenomenon (e.g., Turok, 1993; Munday et al., 1995).

In summary, while transnational corporations may exist in response to host country regulation in the conventional sense of the word, their cross-border expansions may also respond to modes of social regulation at home and these modes' efficacy at resolving contradictions in the domestic regime of accumulation. This institutional approach to international business and formation of transnational corporations poses a significant challenge to conventional neoclassical interpretations of globalization and the emergence of transnational corporations. Through the window of spatially differentiated regulatory regimes, this approach provides a partial explanation of the uneven development of transnational activities. Having established the conceptual tools, I shall now proceed with an empirical analysis of the regionalization of national firms from Singapore.

Developing an "External Wing": Outward Investment from Singapore

Singapore is a city-state strategically located at the southern tip of the Malay peninsula of Southeast Asia. It has grown from a British colonial entrepôt in the late 19th and early 20th centuries to a modern economic center specializing in high value-added manufacturing activities and international financial and business services (Régnier, 1991; Huff, 1994; Perry et al., 1997). Today, it boasts an impressive GNP per capita of US $26,400 (*Asia Magazine*, 1996:17). The domestic economy has experienced growth rates above an average of 6.7% over the past three decades (Huff, 1995). Inward foreign investment has always been one of the cornerstones of the island economy (Hughes and Sing, 1969; Yoshihara, 1976; Mirza, 1986; Rodan, 1989; Low et al., 1993). Singapore is characterized by an export-led regime of accumulation in which domestic consumption interacts with production processes consistently shaped by the global strategies of foreign firms. The high growth rates of the Singapore economy

sustain this domestic consumption: the economy grew at 8%, 8.3% and 6.7%, respectively, during the periods 1960–1969, 1970–1979, and 1982–1992 (Huff, 1995:1422, Table 1). In recent years, however, the state has called for a restructuring process that encourages Singaporean firms to regionalize their operations (Kanai, 1993; Régnier, 1993; Yeung, 1998d). A critical examination of this regionalization process within the regulationist perspective follows, beginning with a brief review of the historical geography of outward investment from Singapore and proceeding to an explanation of how the recent regionalization drive is embedded in peculiar regimes of accumulation and modes of social and institutional regulation.

Singapore's Investment Abroad

Historically, outward foreign direct investment (FDI) from Singapore has been small compared to other forms of investment (e.g., portfolio). Most Singaporean firms have had neither the financial strength nor the firm-specific advantage to extend their operations abroad. From the mid-1970s, however, a centrifugal tendency in the Singapore economy began to surface. Singaporean firms now invest directly in other parts of the world. The Department of Statistics (1991, 1996a, 1998) estimated that at the end of 1976, FDI from Singapore was slightly above S$1 billion. This figure subsequently grew to S$1.7 billion by 1981 and S$2.6 billion by 1986; then it skyrocketed to S$21.2 billion by 1993 and S$55.7 billion by 1996. The doubling of FDI from Singapore during the 1990s surpassed that in the 1980s. During the 1980s the state remained preoccupied with consolidating the domestic economy, particularly in the post-1985 recession period and devoted little attention to promoting outward investment. Most FDI from Singapore during that decade came from the private sector. As Singapore moved into the 1990s, however, the state began to recognize the importance of developing an "external wing" of its increasingly saturated and crisis-prone domestic economy. Since then, the state has undertaken many direct and indirect measures to make sure public and private capital will not concentrate in the domestic market at the expense of potentially higher rates of return on investments in other regional economies.

The geographical distribution of Singapore's FDI is highly uneven over space. A significant proportion of it occurs within the Asian region. The rather complex ownership of outward FDI from Singapore differs from that in other NIEs. Because of the heavy foreign presence in its domestic economy, a large proportion of Singapore's FDI originates from companies mostly or wholly owned by foreign firms (Low et al., 1998; Department of Statistics, 1996a). During the 1980s, wholly or mostly local-owned companies in Singapore accounted for more than half of total outward FDI; by the 1990s, foreign-owned companies accounted for more than 56% of total FDI from Singapore. The latter corporations' investment decisions,

however, were primarily controlled and made by regional headquarters and regional offices in Singapore, deeply embedded in the social and institutional fabric of the Singapore economy (Perry, 1992, 1995; Perry et al., 1998; Yeung, 1998e). They received as much state and institutional support during Singapore's recent regionalization drive as did local companies.

Singapore's Regimes of Accumulation

As explained earlier, a regime of accumulation involves the production-consumption link and serves as a macro-economic structure of any capitalist society. Singapore's early regime of accumulation can be broadly conceived as a form of export-led development[7] with three peculiar characteristics: heavy dependence on foreign investment in the labor-intensive industrialization process; active involvement of state-owned enterprises in the domestic economy; and regionalization as a key form of economic restructuring. Under this regime of accumulation, economic growth occurs predominantly on the basis of labor-intensive production methods and the expanding size of the labor force.

First, the Singapore economy was, and still is, heavily *dependent on inward foreign investment*.[8] In 1966, foreign investment represented some 45% of total gross fixed assets in manufacturing (Rodan, 1989:99). By 1978, this figure had grown to 79%. Largely foreign-owned companies also accounted for 87% of all manufactured exports in 1976–1988 (Rodan, 1989: 130). The Department of Statistics (1992a:11, Table 7) estimated that by 1989 foreign interests controlled some 73% of total assets in all sectors of Singapore's economy, worth S$685 billion. Today, Singapore hosts some 3,000 foreign transnational corporations, more than 700 of them in the manufacturing sector (Tan, 1995:5). Three sectors had high percentages of assets controlled by foreign interests: financial (80%), manufacturing (67%), and commerce (52%).

Prior to its independence in 1959, Singapore was a British colony with significant British investment, mainly concentrating in the trading and distribution sectors. Tremewan (1994:10) notes that during the first half of this century, "[l]ocal capital continued to play a dependent and complementary role to British controlled primary production and trade." With independence and changing global economic conditions, Singapore attracted a huge influx of foreign investment from the U.S. and Western Europe, which took advantage of Singapore's explicit policies towards export-oriented industrialization. Singapore perceived this strategy of courting foreign capital as "essential in view of the weak domestic technological base and the long lead-time needed to transform domestic entrepôt traders and small-scale entrepreneurs into a dynamic industrial entrepreneurial class able to compete in the global market" (Chia, 1997:32). The early wave of inward FDI, however, was largely Taylorist in nature, as

foreign manufacturing firms looked for low-cost production sites. By regulating its domestic labor and capital markets, the state created favorable conditions for global capital to locate labor-intensive, export-oriented production in Singapore (Rodan, 1989; Low et al., 1993). The share of foreign investment in Singapore's GDP rose steadily from 9% in 1966 to 18% in 1970 and 28% in 1980 (Department of Statistics, n.d.). Mirza estimates that in 1975, some 49% of total inward FDI in Asia went to Singapore (1986:46). By the early 1970s, Singapore had become a preferred offshore assembly location for foreign electronic manufacturers. Between 1968 and 1976, output in electronics grew from about S$56 million to S$1.7 billion (Department of Statistics, n.d.:80; Department of Statistics, 1987:20). About 90% of this was exported. In the same years, the proportion of the labor force in electronics manufacturing expanded from 3.1% to 17.3%. The industry has dominated Singapore's manufacturing sector since then; in 1991 it accounted for 38% of the value of total manufacturing output (Ho, 1995:116).

The late 1960s and the 1970s witnessed a massive expansion of FDI from the U.S., Japan and other European countries (Mirza, 1986; Department of Statistics, 1992b, 1996b). Towards the mid-1970s, Singapore's low-cost export-oriented industrialization strategy faced increasing pressures in the labor market as wages began to surge and manufacturers faced a serious shortage of labor. There appeared to be a need for industrial restructuring towards more capital-intensive production practices to resolve the contradictions in this export-led regime of accumulation (Ho, 1993, 1994; Clark and Kim, 1995; Chiu et al., 1997). The four industrial groups that experienced the most change included: electrical and electronics; food, beverages and tobacco; industrial machinery; and chemicals, petroleum and pharmaceuticals. Interestingly, this restructuring in a tight labor market yielded not deepening of capital but intensifying of labor utilization, with a third shift added to offset the high fixed costs of machinery and to maintain flexible employment arrangements, and women encouraged to enter more fully into the labor force.

Second, *the role of state-owned enterprises* in the Singapore economy should not be underestimated. In the early phase of the export-led regime of accumulation, the state played a leading role in the creation of suitable conditions, including direct state control of industry. Public investment in the industrial sector started as early as 1963 when several public enterprises in manufacturing were established to supply domestic markets. Rodan argues that this trend reflected "the government's thinking that the question of industrial structure should not be left solely to the market—especially given the absence of a domestic industrial bourgeoisie of any consequence" (1989:77). Soon after this the state took on a heavy responsibility for the provision of public infrastructure, establishing state-controlled statutory boards to provide the nation with roads, electricity, transport and communications. State-owned enterprises spun off from

these statutory boards sowed the seeds for the domination of government-linked companies in the regionalization drive during subsequent years. By 1983, the state had invested in 58 diverse companies with a total paid-up capital of S$2.9 billion. These companies, in turn, owned some 490 other firms wholly or partially (Huff, 1995:1428). Some of these large state-owned enterprises have grown significantly since then and are spearheading the regionalization of Singapore's economy (e.g., the Keppel Group, the Sembawang Group and Temasek Holdings). By the early 1990s, the public sector and government-linked companies accounted for about 60% of Singapore's GDP (Ministry of Finance, 1993a:39).

State-owned enterprises participated directly in the capital accumulation process through the provisions of credits and loans, subsidization of labor costs, and expansion of land supply. In Singapore's early phase of industrialization, there was a high degree of integration between the financial sector and the manufacturing sector. The government established the Development Bank of Singapore in 1968 as an industrial bank to provide long-term financing for the nascent industrial sector. This had a tremendous "demonstration effect" on the banking sector.[9] In 1962, bank credit to the manufacturing sector accounted for only 12.7% of total loans and advances to customers. This ratio rose to 17.2% in 1966 and 30% in 1972, and contrasted very favorably with the situation in Hong Kong (Chiu et al., 1997:46). The state also acted through the Housing and Development Board in the provision of public housing and in "correcting" distortions in the housing market, which assisted the reproduction of cheap labor for deployment by export-oriented production (Castells et al., 1990; Tremewan, 1994). The Housing and Development Board has the statutory right to use capital from the national saving scheme, the Central Provident Fund, for constructing subsidized public housing. Today, almost 85% of Singapore's 3 million people reside in public housing. Furthermore, the state has created good quality but inexpensive industrial sites through the Jurong Town Corporation. As a result, industrial land increased 359% between 1967 and 1982, while warehouse land increased 40% (Ho, 1995:117).

A third defining characteristic of Singapore's regime of accumulation in recent years has been *regionalization through outward FDI*. The virtually undisturbed growth of the Singapore economy in the 1960s and 1970s brought increasing pressures to bear on its export-led regime. By the early 1980s, the Singapore economy faced a serious accumulation crisis, which culminated in a severe recession in 1985. Output in the electronics industry fell by 5.4% and the industry shed between 10,000 and 13,000 workers (Ho, 1995:116). Global structural decline in two major industries in Singapore, shipbuilding and petroleum, added to the crisis. According to a special committee set up to review the recession and Singapore's future policy directions, the recession was caused primarily by the lack of competitiveness in Singapore's manufacturing sector (see Ministry of Trade

and Industry, 1986). While Singapore's industrial production expanded by an average of 4% per annum between 1981 and 1984, the average for the other Asian NIEs was 10%. Overreliance on foreign capital vis-à-vis domestic capital in Singapore's industrialization contributed a great deal to poor performance. Other Asian NIEs benefited from the competitive strength of their national firms, aggressive technological development programs, and lack of dependence on foreign companies.

Because the shift towards higher value-added production was not completed, foreign production in Singapore faced problems of declining profits because of the labor "squeeze." By the mid-1970s Singapore had already moved from the labor-surplus situation of the 1950s and 1960s to a full-employment situation. Wages began to rise rapidly when the guidelines provided by the National Wages Council (NWC) suggested double-digit percentage increases in wages in 1973, 1974 and 1979. In the 1980s, the labor shortage worsened. In a survey of labor turnover in the electronics and electrical industry in 1987, it was estimated that out of an average of 233 workers recruited per factory, 50 (21.5%) resigned within the first month and a total of 64 (27.5%) resigned within three months of employment (Ho, 1993:54–6). As a direct consequence, many manufacturing plants relocated to lower-wage countries in the region.

In response, the Economic Committee identified overseas investment and the development of offshore business opportunities as long-term solutions to the accumulation crisis in Singapore. In the years to follow, Goh Chok Tong—then Deputy Prime Minister—proposed the idea of a "growth triangle" to bring together Singapore, Indonesia and Malaysia on the basis of a technical, sectoral and regional division of labor (Perry, 1991; Parsonage, 1992; Ho, 1994; Ho and So, 1997). Under this proposal, labor and land constraints in Singapore would impel the relocation of low value-added and labor-intensive production processes to Johor, Malaysia or Riau, Indonesia. Only high value-added manufacturing activities were to remain in Singapore. In terms of the division of labor by sector, Singapore would play a more important role in services as the regional headquarters for transnational corporations operating simultaneously in all three locations (Dicken and Kirkpatrick, 1991; Perry, 1992, 1995; Perry et al., 1998; Yeung, 1998e). A regional division of labor was *expected* to emerge because the three countries had different comparative advantages and could therefore play complementary roles in an evolving regional interdependence. As Ho notes, this regional division of labor is based on "the logics of cost and sophistication (capital and skill intensity), with Singapore at the apex, Malaysia in the middle, and Thailand, the Philippines, and Indonesia at the low-cost, labor-intensive end" (1995:135). In short, through the growth triangle Singapore tried simultaneously to contain its domestic accumulation crisis and export contradictions in its labor processes to two neighbor countries.

The growth triangle formed the antecedent of Singapore's regionalization program, which was officially inaugurated in 1993. In January of that year, Senior Minister Lee Kuan Yew announced that the state was taking new initiatives to generate a bigger pool of local entrepreneurs and to build up the external wing of the Singapore economy (Régnier, 1993). This national strategic thrust is known as "Regionalization 2000." The state wanted to develop this external wing because most advanced industrialized countries had a large number of their national firms globalizing to profit from the resources, talents and markets of the rest of the world. Goh Chok Tong, now Prime Minister, made it clear that "[g]oing regional is part of our long-term strategy to stay ahead. It is to make our national economy bigger, our companies stronger and some of them multinational" (*Speeches*, 1993:15). According to a report by the Ministry of Finance (1993a:14), an external economy can help overcome Singapore's small domestic market and limited resource base. It generates business and economies of scale for companies based in Singapore, making the domestic economy more productive. In addition, it allows Singaporean firms to contribute to and benefit from the rapid growth of the countries in the region so that Singapore need not depend so heavily on developed countries for growth and markets. This argument conforms implicitly to Porter's (1990) view that the competitive advantage and wealth of national firms and their home countries are essentially the same. If national firms are competitive abroad, so is the home country in which these firms are incorporated.[10] The issue here involves the question of how the regionalization process should be socially and institutionally regulated.

The Social Regulation of the Regionalization Process

The regionalization of the Singapore economy should be seen as an institutional response to the limits on growth resulting from an over-reliance on inward investment from North America, Western Europe and Japan, and from the structural rigidity yielded by the domestic domination of state-owned enterprises. In the first instance, the dependence on foreign capital has rendered the Singaporean economy more susceptible to the export of accumulation crises from advanced developed countries. Regionalizing Singapore's corporate sector could enable the city-state economy to generate national incomes from more geographically diversified locations, particularly from emerging markets in Asia. In the 1985 recession and the more recent slowdown of growth in 1996, relative stagnation in Singapore's exports to the global electronics industry significantly reduced its domestic growth. Building an external economy for Singapore through regionalization would help to reduce Singapore's dependence on inward investment for economic growth and capital accumulation.

Moreover, the domination of large state-owned enterprises—now collectively known as government-linked companies after the privatization process starting in the late 1980s (see Low, 1991)—has contributed to structural rigidity in the domestic economy and an inability to restructure and adapt to changes in the global economy. In advanced industrialized countries and other Asian NIEs (e.g., Hong Kong and Taiwan), small- and medium-sized firms (SMEs) play an important role as shock-absorbers in times of crisis because of their flexibility and protected market niches. SMEs are as vulnerable to cyclical downturns as are large corporations (e.g., see Harrison, 1997). SMEs often form subcontracting networks centered around large corporations, however, which play an important role in the big firms' survival strategies in times of crisis. SMEs do not have a significant presence in Singapore. This arises from the process of export-led industrialization in the early phase of Singapore's economic development, when the state relied on foreign firms and state-owned enterprises to kick start economic development. Over time, the interests of SMEs have continued to be subordinated to those of the state and foreign capital. This also explains the weakness of private entrepreneurship in Singapore (Lee and Low, 1990; Yeung, 1998d).

In this context, the state initiated the regionalization drive to fix contradictions in its regime of accumulation through a distinct set of social and institutional mechanisms.[11] I argue, however, that this institutional fix actually deepens contradictions in the domestic regime. The next section of this paper addresses two important aspects of the fix: regulating the domestic labor market, and state initiatives spearheaded by government-linked companies.[12]

Regulating the Domestic Labor Market

The social regulation of local labor markets in Singapore has evolved over time, from antilabor measures by the state in the early phase of industrialization to "corrective" measures in the midst of rapid industrialization and finally to policies to promote entrepreneurship and spatial mobility of the Singaporean labor force. The regionalization of Singaporean firms should be understood in the context of these changing forms of labor market regulation. The rapid influx of foreign capital in the immediate post-independence era can largely be explained by local labor market regulation in which labor movements were consciously suppressed and labor disciplined (Rodan, 1989; Huff, 1994). This local labor market regulation was deemed necessary because "as an NIE operating in a turbulent world with many manufacturing location options, [Singapore] can survive successfully only if state intervention structures local and regional conditions to fit the requirements of international capital" (Ho, 1994:48). The political defeat of labor in Singapore had a crucial impact on the early mode of regulation. In a first move towards this goal, three organizations came

together in late 1965 to ratify a Charter for Industrial Progress: the National Trade Union Congress, the Singapore Manufacturers' Association and the Singapore Employers' Federation. Under this Charter, "all partners in the industrialization program—worker, employer, government—must pool their efforts and strive for a continuing increase in productivity and output in all enterprises" (quoted in Rodan, 1989:91). The Charter's appeal agreed with the ideological notions of self-sacrifice for the collective good and economic problems being above class interests that were promulgated by the dominant political party, the Peoples' Action Party (PAP), headed by then-Prime Minister Lee Kuan Yew. Through its political influence in the tripartite National Trade Union Congress—which comprised representatives from the PAP government, labor and capital—the state denied labor unions their traditional role as legitimate interest groups and corporatized labor into the management needs of the state.

The 1966 Trade Union (Amendment) Act had a significant impact on the subsequent development of the labor movement. This powerful act turned against organized labor, declaring strikes and other industrial action illegal unless approved through secret ballot by a majority of a union's members. It banned strikes in essential services altogether. It also amended the Trade Union Ordinance to outlaw sympathy strikes and entrust the Labor Minister to bar the formation of a federation of unions in essential services. The Employment Act of 1968 further altered the conditions of service and remuneration of employees by increasing the standard weekly working hours and reducing public holidays and leave. The act resulted in considerable savings to employers in direct and indirect payments to labor. The Industrial Relations (Amendment) Act also expanded the prerogatives of management by barring such issues as promotions, transfers, retrenchments, dismissals, reinstatements and work assignments from union negotiation. These constitutional measures greatly weakened the scope for industrial action and marked the arrival of corporatism in Singapore. As Rodan notes, "one thing was abundantly clear: militant trade unionism was finished in Singapore. Labor was now part of the corporate structure of the Singapore state" (1989:93). Together, the Charter for Industrial Progress and labor laws led to the creation of a highly disciplined and depoliticized labor force, allowing its smooth entry into the periphery of the new international division of labor spearheaded by global transnational corporations (see Fröbel et al, 1980). Tremewan argues that "[w]ithout a supportive and strong local industrial capitalist class, the PAP could not extract better terms in the relationship [with foreign capital]. In its own class interest, the PAP therefore exposed the workers of Singapore to massive exploitation" (1994:34).

Through the 1970s, labor market regulation in Singapore had as its primary objectives suppressing wages and increasing productivity. By the end of the decade, the state began to see the problem in this low-cost labor

and export-oriented expansion strategy. On the one hand, labor remained low in skill and productivity; on the other, low wages suppressed domestic consumption and local markets.[13] To counter the high dependence of the economy on labor-intensive production established by foreign firms, Singapore implemented a corrective wage policy. In 1979, the National Wage Council recommended a considerable increase in wages, including a basic monthly pay raise of S$32 for all workers plus an additional 7% of each worker's going wage (Rodan, 1989:144). It also recommended that employers pay an extra 4% per worker towards a national compulsory saving scheme. In addition, it proposed a Skills Development Fund to aid upgrading of labor skills, to be financed by the imposition on employers of a levy of 2% or S$5 for each employee receiving S$750 or less per month. Local and foreign capitalists reacted strongly to the shock of these drastic wage increases. Whereas local business groups labeled the government's corrective wage policy a "bombshell," foreign firms found the shifts in wage scenarios disturbing and "painful." One major issue of contention centered on the fact that the wage recommendations were not pegged to productivity increases or workers' dedication to the job. As observed by Chiu et al. there seemed to be some contradictory tensions "between the industrialists, who were concerned with maintaining competitiveness within their respective industries, and the state planners, who saw the high wage policy as performing a redistributive function between industries" (1997:129).

Another aspect of labor market regulation was the increasing participation of foreign workers in Singapore's labor force (see Ho, 1993, 1994, 1995; Chiu et al., 1997). Firms were more willing to employ foreign labor because they were less likely to job-hop and had more positive work attitudes (including willingness to work extra hours and night shifts), higher education levels and relative youth. Between 1975 and 1979, foreign labor constituted one third of the growth in the workforce. Between 1980 and 1984, foreign workers accounted for more than half of the workforce increase. In the late 1970s and early 1980s, the state viewed foreign workers as a stopgap measure. By the late 1980s, however, it had decided to allow for a carefully controlled intake (Ministry of Trade and Industry, 1991). Thereafter the state developed more indirect foreign worker policies, using a foreign worker levy and quotas to constrain the demand and supply of immigrant workers. The size of the levy and quotas differed not only for skilled and unskilled workers but also between industries. These policies, however, generally favored high-tech and high value-added foreign firms, as indicated by these firms' relative ease in getting foreign worker approval and quotas.

By raising wages and rationalizing production, the state hoped to induce a "Second Industrial Revolution" aimed at shaking out inefficient labor users. Some labor-intensive foreign manufacturers subsequently relocated their production facilities to lower-cost countries (Ho, 1993,

1994; Yeung, 1998d). Others moved up the technological ladder by upgrading their value-added activities and automating their operations in Singapore. Many local enterprises were also compelled to relocate their labor-intensive operations to nearby countries, such as Malaysia, to save costs and to follow their customers, while keeping their management and control functions in Singapore (Yeung, 1998f). The social regulation of the local labor market therefore had the unintended consequence of forcing some Singaporean firms to regionalize their production as early as 1980, mostly in labor-intensive manufacturing. At that time, ideas of growth triangles and regionalization had not yet been mooted.[14]

Not until 1993 did anyone see that the regulation of labor markets could comprise a conscious instrument to promote the regionalization of Singaporean firms and that regionalization could be an answer to Singapore's accumulation crisis. At that point the state initiated policies to increase the spatial mobility of Singaporean expatriates and their willingness to work abroad, policies aimed less at increasing the quantity of expatriate labor than at shaping the attitudes of Singapore's expatriate labor force. The state saw this form of labor market regulation as complementary to existing wage-based labor market regulation. In January 1993, Prime Minister Goh Chok Tong appointed the Committee to Promote Enterprise Overseas, which subsequently recommended various measures to assist Singaporean businessmen and companies in overseas ventures and to encourage Singaporeans to be more entrepreneurial. In their final report, published in August 1993, the Committee identified two important areas of support related to the quality of labor in Singapore: relocation assistance and creating entrepreneurial spirit (Ministry of Finance, 1993b).

In the first area, the Committee noted that Singaporeans venturing abroad must make substantial adjustments during the process of relocation and subsequent return, concerned with personal and family matters such as the disruption of their children's education and the reconciliation of their own national service reserve duties. Various measures have been taken to help Singaporean families going overseas to make their adjustments (see Willis and Yeoh, 1998). In one of these, the Singapore International Foundation has established a one-stop information center to provide Singaporeans with the necessary information to help them adjust to foreign life. The Ministry of Education has also established the Education Information and Guidance Unit to help families with educational arrangements for their children. Other measures include setting up Singaporean schools and mother tongue language tuition centers abroad where sufficient demand exists, providing hostel facilities in Singapore, and facilitating reentry into schools in Singapore. Even medical groups have been encouraged to establish services in locations with a high concentration of Singaporeans. For example, Raffles Medical Group has set up a medical service center in the Suzhou-Singapore Industrial Park in China's

Jiangsu Province. As for Singapore businessmen who shoulder the duty of being reservists in the national service, the Ministry of Defence has taken significant steps to liberalize exit control and minimize the inconvenience of going abroad for business for reservists and persons liable for national service.

In the second area, the Committee declared that developing entrepreneurial spirit among Singaporeans has a critical impact on the enhancement of the quality of labor for regionalization. The underdevelopment of local entrepreneurship in Singapore comprises one of the major contradictions of an externally-grafted export-led regime of accumulation, where talents have been mostly absorbed into foreign firms or state-owned enterprises (Tan, 1991; Yeung, 1998d). The relatively inactive role of local SMEs in the regionalization process testifies to the lack of indigenous entrepreneurship in Singapore. In 1990, only 6% of companies in Singapore—2,293 companies of a total of 36,573—had regionalized their operations (Ministry of Finance, 1993a:70). Most of these were subsidiaries of foreign-owned firms or state-owned enterprises. Even among the Asian NIEs, Singapore compared unfavorably in terms of its extent of transnational operations (Yeung, 1994). Business firms from Hong Kong, another city-state in Asia with a similar level of economic development, had a long history of internationalization (Yeung, 1996, 1997, 1998c). At this stage of Singapore's regionalization, private sector investment played a rather dismal role.

The Committee recognized that developing an external wing of Singapore's economy required an active role for local entrepreneurs (Ministry of Finance, 1993b). Successful local entrepreneurs grasp opportunities in the regional and global marketplace. The future of these local companies would depend on whether their owners and management teams could keep alive the entrepreneurial spirit that sparked their founding. As Senior Minister Lee Kuan Yew noted at the Singapore Business Awards dinner on 8 January 1993:

> Our track record makes me confident that we have the men [*sic*] and the resources to meet this challenge. We can change our orientation. We can alter our social climate to become more encouraging and supportive of enterprise and innovation. We can enthuse a younger generation with the thrill and the rewards of building an external dimension to Singapore. We can and we will spread our wings into the region and then to the wider world. (quoted in Lee, 1994:2)

The preexisting mode of social regulation already included various government schemes for nurturing local enterprises through financing, market and investment development, as well as schemes to encourage development of new products and brands (Economic Development

Board, 1993). The Committee noted, however, that Singaporeans lacked certain attitudes and skills that would enable them to perform more effectively as entrepreneurs. It recommended a "soft" approach to this dearth of entrepreneurship. Apart from equipping students with basic skills and knowledge, the Committee held that the education system should also encourage students to be more inquisitive, to exercise their creativity, to learn to solve problems and cope with uncertainty, and to adopt a regional and global outlook. It supported the Ministry of Education's existing programs to promote innovation and creativity among schools and the move towards more flexibility in Singapore's tertiary institutions.

State Initiatives Spearheaded by Government-Linked Companies

The second aspect of Singapore's mode of social regulation to sustain its export-led regime of accumulation involves state-led initiatives to support the regionalization program. The state has been actively involved in national development projects since independence in 1959. After the economic recession in 1985, Singapore, like other countries in this era, set in motion a process of privatization. Over time, formerly state-owned enterprises have been transformed into publicly traded companies, although they remain largely government-linked companies (e.g., Singapore Airlines, Keppel Corporation, Sembawang Group, and Singapore Technologies Group). These corporations have become one of the primary instruments through which the state has driven regionalization. Government-linked companies are managed under four state-owned holding companies: Temasek Holdings, Singapore Technologies Pte Ltd, MinCom Holdings, and MND Holdings. Together with statutory boards, these government-linked companies partner with private sector companies in overseas ventures by forming joint ventures and consortia and spearheading large infrastructural projects (Ministry of Finance, 1993a:42–3). For example, as early as 1989, Temasek Holdings, the Singapore Government's investment arm, entered into a partnership with a locally listed company, Yeo Hiap Seng, to purchase an American food company, Chun King. In the same year, Singapore Airlines, the largest government-linked corporation, invested about US$180 million in Delta Airlines in the U.S. Of the S$2 billion outward FDI made between late 1988 and 1991, some 70% could have come from the Singapore Government and government-linked companies (Ho, 1995:139). The government's investment arm also acted as a venture capitalist, financing high-tech startup firms in Silicon Valley in return for the transfer of advanced technology and assembly-line operations back to Singapore (Chiu et al., 1997:132). For example, in 1991 two government agencies, Singapore Technologies Ventures and the Economic Development Board, invested more than US$40 million in venture

capital in Momenta International, a California company that develops pen-based computing technology.

In principle, the state identified three distinct modes for regionalization (Economic Development Board, 1995). First, Singaporean companies can venture into the region on their own or in partnership with other companies—private sector-led regionalization (e.g., the Chemical Industries-Air Liquide partnership in Thailand). Broad government-to-government agreements will facilitate these companies at the macro level. The state will help them regionalize through the use of incentives, loans and equity co-investment. Second, the private sector and commercial segments of the public sector can form consortia to undertake regional investment projects on a large scale (e.g., port development in Changsu, China). This mode is known as "Singapore Inc." regionalization. In the third mode, industrial site development regionalization, the state or private sector identifies and develops suitable sites to access external markets and resources (e.g., Suzhou- Singapore Industrial Park and Wuxi-Singapore Industrial Park in the Jiangsu Province, China). In this manner, Singapore transfers characteristics of its business environment to a foreign locale. This approach reduces the start-up and operating risks of Singaporean companies as they establish themselves abroad.

In recent years, the regionalization process has taken on a new degree of politicization, as top leaders have become directly involved in the opening-up and promotion of business opportunities for government-linked companies and local firms. I have referred to this elsewhere as "political entrepreneurship" (Yeung, 1998d). For example, Singapore's investment in China increased substantially after October 1990, when the two countries established diplomatic relations and the Singapore Government prioritized encouraging companies to venture abroad (Cartier, 1995; Lu and Zhu, 1999c). At that time, senior officials from Singapore made a number of visits to China to improve the *guanxi* (relationships) between the two countries. Senior Minister Lee Kuan Yew visited many sites in China to build connections with local governments and officials and pave the way for Singaporean firms. A state visit by Prime Minister Goh Chok Tong in 1993 further strengthened business ties with China at the state level. The Suzhou township project, for instance, is a commercial proposal riding on congenial inter-state relationships. In this way, Singapore has officially endorsed the regionalization process not just as an institutional fix but as a form of economic ideology and political agenda as well. This economic corporatism of the state figures prominently in Singapore's mode of social regulation. To a large extent, the state in Singapore has gone far beyond Eisinger's original notion of an "entrepreneurial state" which functions to "identify, evaluate, anticipate, and even help to develop and create . . . markets for private producers to exploit, aided if necessary by government as subsidizer or coinvestor" (1988:9).

Conclusion

This paper has critically explored the regionalization of Singaporean enterprises. It has shown that an institutional perspective can provide a useful set of conceptual tools through which contradictions in Singapore's regime of accumulation and their resolution can be analyzed. Since its independence in 1959, Singapore has relied on a form of export-led industrialization as its main regime of capital accumulation. Within this regime of accumulation, three peculiar characteristics have clearly emerged over the past three decades: heavy dependence on foreign investment for industrialization; active involvement of state-owned enterprises in the domestic economy; and regionalization as a key means of economic restructuring. Despite a gradual shift of the economy from a peripheral low-cost assembly location in the 1960s and 1970s to a modern manufacturing center and international business hub in the 1980s and 1990s, Singapore's capital accumulation process remains distinctively export-led in that production is welded into a less apparent mode of social regulation in which labor is reproduced primarily to serve the interests of the state and capital.

The paper has emphasized the integral role of the mode of social regulation as an institutional fix to contain the economic tensions and social contradictions in Singapore's regimes of accumulation. Such a process results not purely from abstract economic rationality, but rather from Singapore's distinct mode of social regulation. The paper has discussed two aspects of such a corporatist mode of social regulation. First, the social regulation of the local labor markets has created the conditions for the dependence on foreign capital, a contradiction that has eventually driven Singaporean firms abroad. Second, the institutionalization of the corporatist state has given the regionalization process ideological and political underpinnings. The case of Singapore's regionalization drive demonstrates the possibility that an institutional perspective can be used to analyze economic restructuring in a developing Asian economy. It serves as a more comprehensive and theoretically driven approach to counter existing neoclassical interpretations of the "Asian miracle" or the recent Asian economic crisis. Informed by studies in the political economy of international business, the perspective can also be adapted to explain the institutional foundations of international business activities. The international operations of national firms can no longer be explained merely by abstract economic logic; we have to take into account the peculiar social and institutional mechanisms in their home countries. To construe these important capitalist institutions as pure economic actors is to misunderstand their intricate nature and complex organization.

Acknowledgments

I would like to thank Adam Tickell, Erik Swyngedouw, Michael Webber and Dick Walker for their very helpful comments on earlier versions of this paper. The paper forms a part of a larger research project on the regionalization of transnational corporations from Singapore funded by the National University of Singapore Academic Research Grant (RP960045). None of these individuals and institutions, however, should be blamed for any error or mistake contained in this paper.

Notes

1. I borrow the term "institutional fix" from Peck and Tickell (1994).
2. See also Jessop (1990; 1995), Brenner and Glick (1991), Hirst and Zeitlin (1992), and Joseph (1998).
3. Some regulationist studies of advanced industrialized countries include Aglietta (1976), Moulaert and Swyngedouw (1989), Fagan and Le Heron (1994), Peck and Miyamachi (1994), Haughton and Browett (1995), and Peck and Tickell (1995). A few recent studies of economic restructuring in Eastern European and East Asian countries have also adopted the regulationist perspective (e.g. Smith, 1994, 1995; Sum, 1998). The perspective has also been applied to the study of forest utilization and sustainable development in developing countries (e.g., Drummond and Taylor, 1997).
4. Some Marxists may argue that the regulationist perspective has focused too much on institutional fixes and state actions rather than on fundamental economic categories. Joseph, for example, notes that "as these regulatory institutions are increasingly focused on, it is easy to forget what it is they are trying to regulate, and that what they are trying to regulate cannot indeed be regulated successfully" (1998:93–4). This "lack-of-Marxism" critique, nevertheless, loses validity if one sees the regulationist perspective as a methodology to analyze capitalist crises and their institutional fixes, however temporary. These nonmarket institutional fixes differ from economic fixes in that the latter refer to market-based mechanisms and policy instruments.
5. For some general characteristics of transnational corporations based in Asian NIEs, see Yeung (1994, 1999a).
6. I borrow the term "regulatory deficit" freely from Peck and Tickell (1995).
7. Using concepts from the regulationist perspective, Sum has labeled this accumulation regime "exportism," which focuses on the mode of global connection and its internalization within a territorial embedded social formation (1998:56).
8. See Tremewan (1994) for a brief account of the historical origins of the political alliance between the local capitalist class and foreign capital in Singapore.
9. A report by the director of the Development Bank of Singapore in 1969 observed that "some banks are now beginning to grant term loans of, say, up to five years to industries. This step may have been taken as a result of the establishment of the Development Bank of Singapore [DBS]. The provision of term loans may lead to opportunities for the more lucrative short-term financing. Unless banks want to lose business to Development Bank of Singapore, which also provides short-term loans, it may be to their interest to consider giving term loans to manufacturers." (Quoted in Chiu et al., 1997:47–8)
10. The state's apparent elision of the distinction between the wealth of national firms and the wealth of the country also appears in the Strategic Economic

Plan published by the Ministry of Trade and Industry (1991), in which Porter's views were again fully taken on board.

11. See Tremewan (1994) for an exposition of four major state institutions in Singapore's mode of social regulation: public housing, education, the political system and the judiciary.
12. Space limits preclude discussion of other less important non-state forms of the local mode of social regulation in the regionalization of Singaporean firms—e.g., the politics of Chinese capital, the role of clan associations and guild organizations, and so on.
13. Another major reason for low domestic consumption was the role of the Central Provident Fund, through which disposable income was effectively reduced.
14. Singapore's financial system comprised another, less important element in regulating the restructuring process. As early as 1976, the state set up the Small Industry Finance Scheme (SIFS), later renamed the Local Enterprise Finance Scheme, to help SMEs upgrade their production facilities and to finance working capital (Chiu et al., 1997; Yeung, 1998d). Although a government agency, the Economic Development Board, was responsible for administering the scheme in terms of screening applicants, the actual disbursement of loans was made by several participating banks and financial institutions on a joint risk-sharing basis. The state-controlled DBS Bank played a central role in the initial stage of the SIFS. In the next 10 years, many other financial institutions jumped on the bandwagon after the scheme had proven to be a relatively safe undertaking. By 1986, 15 financial institutions participated in the scheme (Chiu et al., 1997:141). The success of the scheme, however, must be weighed against the primary orientation of the banking sector towards nonmanufacturing activities. For example, the proportion of manufacturing loans in all bank loans declined from 21.5% in 1980 to 12.1% in 1992 (Chiu et al., 1997:141). Instead, many SMEs have relied on the capital market for business financing. In 1985, the Economic Development Board set up a S$100 million venture capital fund to encourage the growth of the venture capital industry. In 1987, the government also launched the Stock Exchange of Singapore Dealing and Automated Quotation System, a secondary stock market, to encourage entrepreneurship and allow start-up firms access to long-term equity capital. Through these various avenues, the financial system in Singapore has become much more conducive to the development of high-tech, high value-added and innovative industries and firms. It serves as a catalyst in regulating the ongoing restructuring process and, subsequently, the regionalization program.

References

Aglietta, M. (1976) *A Theory of Capitalist Regulation*. London: New Left Books.

Altvater, E. (1992) Fordist and post-Fordist international division of labor and monetary regimes. In M. Storper and A.J. Scott (Eds.) *Pathways to Industrialization and Regional Development*. London: Routledge, pp. 21–45.

Amin, A., and N. Thrift (1994) Living in the global. In A. Amin and N. Thrift (Eds.) *Globalization, Institutions, and Regional Development in Europe*. Oxford: Oxford University Press, pp. 1–22.

Asia Magazine (1996) Fixing the safety net. 16-18 August:16–18.

Barnes, T. (1996) *Logics of Dislocation: Models, Metaphors, and Meanings of Economic Space*. New York: Guilford.

Boyer, R. (1990) T*he Regulation School: A Critical Introduction*. New York: Columbia University Press.
Brenner, R., and M. Glick (1991) The regulation approach: theory and history. *New Left Review* 188:45–119.
Buckley, P.J., and M. Casson (1991) T*he Future of the Multinational Enterprise*. Second edition. London: Macmillan.
Cartier, C.L. (1995) Singaporean investment in China: installing the Singapore model in Sunan. *Chinese Environment and Development* 6:117–44.
Castells, M., L. Goh, and R.Y.W. Kwok (1990) *The Shek Kip Mei Syndrome: Economic Development and Public Housing in Hong Kong and Singapore*. London: Pion.
Caves, R.E. (1996) *Multinational Enterprise and Economic Analysis*. Cambridge, Eng.: Cambridge University Press.
Chia, S.Y. (1997) Singapore: advanced production base and smart hub of the electronics industry. In W. Dobson and S.Y. Chia (Eds.) *Multinationals and East Asian Integration*. Canada: IDRC, pp. 31–61.
Chiu, S.W.K., K.C. Ho, and T.L. Lui (1997) *City-States in the Global Economy: Industrial Restructuring in Hong Kong and Singapore*. Boulder, CO: Westview.
Clark, G.L., and W.B. Kim (Eds.) (1995) *Asian NIEs in the Global Economy*. Baltimore: John Hopkins University Press.
Coase, R.H. (1937) The nature of the firm. *Economica* 4:386–405.
Department of Statistics (n.d.) *Economic and Social Statistics, 1960–1982*. Singapore: DOS.
Department of Statistics (1987) *Report on Census of Industrial Production, 1985*. Singapore: DOS.
Department of Statistics (1991) *Singapore's Investment Abroad, 1976–1989*. Singapore: DOS.
Department of Statistics (1992a) *Singapore's Corporate Sector: Size, Composition and Financial Structure*. Singapore: DOS.
Department of Statistics (1992b) *Foreign Equity Investment in Singapore, 1980–1989*. Singapore: DOS.
Department of Statistics (1996a) *Singapore's Investment Abroad, 1990–1993*. Singapore: DOS.
Department of Statistics (1996b) *Foreign Equity Investment in Singapore, 1990–1992*. Singapore: DOS.
Department of Statistics (1998) *Singapore's Investment Abroad, 1996*. Singapore: DOS.
Dicken, P., and C. Kirkpatrick (1991) Services-led development in ASEAN: transnational regional headquarters in Singapore. *The Pacific Review* 4:174–184.
Drummond, I., and D. Taylor (1997) Forest utilisation in Sarawak, Malaysia: a case of sustaining the unsustainable. *Singapore Journal of Tropical Geograph*y 18: 141–62.
Dunford, M. (1990) Theories of regulation. *Environment and Planning D: Society and Space* 8:297–322.
Dunning, J.H. (1988) *Explain International Production*. London: Unwin Hyman.
Dunning, J.H. (1993) *Multinational Enterprises and the Global Economy*. Reading, MA: Addison Wesley.
Dunning, J.H. (Ed.) (1997) *Governments, Globalization and International Business*. Oxford: Oxford University Press.
Economic Development Board (1993) *Growing with Enterprise: A National Report*. Singapore: EDB.
Economic Development Board (1995) *Regionalisation 2000: Singapore Unlimited*. Singapore: EDB.
Eden, L., and E.H. Potter (Eds.) (1993) *Multinationals in the Global Political Economy*. New York: St. Martin's Press.

Eisinger, P.K. (1988) *The Rise of the Entrepreneurial State*. Madison: University of Wisconsin Press.

Elger, T., and C. Smith (Eds.) (1994) *Global Japanization? Transnational Transformation of the Labour Process*. London: Routledge.

Fagan, R.H., and R.B. Le Heron (1994) Reinterpreting the geography of accumulation: the global shift and local restructuring. *Environment and Planning D: Society and Space* 12:265–285.

Florida, R., and M. Kenney (1991) Transplanted organizations: the transfer of Japanese industrial organization to the U.S. *American Sociological Review* 56:381–398.

Fröbel, F., J. Heinrichs, and O. Kreye (1980) *The New International Division of Labour*. Cambridge: Cambridge University Press.

Fukuyama, F. (1995) *Trust: The Social Virtues and the Creation of Prosperity*. London: Hamish Hamilton.

Graham, J. (1992) Post-Fordism as politics: the political consequences of narratives on the left. *Environment and Planning D: Society and Space* 10:393–410.

Harrison, B. (1997) *Lean and Mean: The Changing Landscape of Corporate Power in the Age of Flexibility*. New York: Guilford.

Haughton, G., and J. Browett (1995) Flexible theory and flexible regulation: collaboration and competition in the McLaren Vale wine industry in South Australia. *Environment and Planning A* 27:41–61.

Haughton, G., and J.A. Peck (Eds.) (1996) Special issue: geographies of labour market governance. *Regional Studies* 30:319–441.

Henry, N., S. Pinch, and S. Russell (1996) In pole positions? Untraded interdependencies, new industrial spaces and the British Motor Sport Industry. *Area* 28:25–36.

Hirst, P., and J. Zeitlin (1992) Flexible specialization versus post-Fordism: theory, evidence, and policy implications. In M. Storper and A.J. Scott (Eds.) *Pathways to Industrialization and Regional Development*. London: Routledge, pp. 70–115.

Ho, K.C. (1993) Industrial restructuring and the dynamics of city-state adjustments. *Environment and Planning A* 25:47–62.

Ho, K.C. (1994) Industrial restructuring, the Singapore city-state, and the regional division of labour. *Environment and Planning A* 26:33–51.

Ho, K.C. (1995) Singapore: maneuvering in the middle league. In G.L. Clark and W.B. Kim (Eds.). *Asian NIEs in the Global Economy*. Baltimore: John Hopkins University Press, pp. 113–42.

Ho, K.C., and A. So (1997) Semi-periphery and borderland integration: Singapore and Hong Kong experiences. *Political Geography* 16:241–259.

Hu, Y.S. (1992) Global firms are national firms with international operations. California *Management Review* 34:107–126

Hu, Y.S. (1995) The international transferability of the firm's advantages. *California Management Review* 37:73–88.

Huff, W.G. (1994) *The Economic Growth of Singapore: Trade and Development in the Twentieth Century*. Cambridge: Cambridge University Press.

Huff, W.G. (1995) The developmental state, government, and Singapore's economic development since 1960. *World Development* 23:1421–1438.

Hughes, H., and Y.P. Sing (Eds.) (1969) *Foreign Investment and Industrialization in Singapore*. Madison: University of Wisconsin.

Hymer, S.H. (1970) The efficiency (contradictions) of multinational corporations. *American Economic Review* 70:441–448.

Hymer, S.H. (1972) The multinational corporation and the law of uneven development. In J.N. Bhagwati (Ed.) *Economics and World Order from the 1970s to the 1990s*. New York: Free Press, pp. 113–140.

Jessop, B. (1990) Regulation theory in retrospect and prospect. *Economy and Society* 19:153–216.

Jessop, B. (1992) Fordism and post-Fordism: a critical reformulation. In M. Storper and A.J. Scott (Eds.) *Pathways to Industrialization and Regional Development*. London: Routledge, pp. 46–69.

Jessop, B. (1995) The regulation approach, governance and post-Fordism: alternative perspectives on economic and political change? *Economy and Society* 24:307–33.

Johnson, C. (1982) *MITI and the Japanese Economic Miracle*. Stanford: Stanford University Press.

Joseph, J. (1998) In defence of critical realism. *Capital and Class* 65:73–106.

Kanai, T. (1993) Singapore's new focus on regional business expansion. *NRI Quarterly* 2:18–41.

Kenny, M., and R. Florida (1993) *Beyond Mass Production: The Japanese System and Its Transfer to the U.S*. New York: Oxford University Press.

Lee, T.Y. (1994) *Overseas Investment: Experience of Singapore Manufacturing Companies*. Singapore: McGraw-Hill.

Lee, T.Y., and L. Low (1990) *Local Entrepreneurship in Singapore: Private and State*. Singapore: Times Academic Press.

Lipietz, A. (1986) New tendencies in the international division of labour: regimes of accumulation and modes of regulation. In A.J. Scott and M. Storper (Eds.) *Production, Work and Territory: The Geographical Anatomy of Industrial Capitalism*. London: Allen & Unwin, pp. 16–39.

Lipietz, A. (1987) *Mirages and Miracles: Problems of Third World Industrialisation*. London: Verso.

Lipietz, A. (1992) *Towards a New Economic Order: Post-Fordism, Ecology and Democracy*. Cambridge, Eng.: Polity Press.

Low, L. (1991) *The Political Economy of Privatization in Singapore*. Singapore: McGraw-Hill.

Low, L., E.D. Ramstetter, and H.W.C. Yeung (1998) Accounting for outward direct investment from Hong Kong and Singapore: who controls what? In R.E. Baldwin, R. Lipsey, and J.D. Richardson (Eds.) *Geography Versus Ownership in Economic Accounting*. Chicago: University of Chicago Press, pp. 139–168.

Low, L., M.H. Toh, T.W. Soon, K.Y.Tan, and H. Hughes (1993) *Challenge and Response: Thirty Years of the Economic Development Board*. Singapore: Times Academic Press.

Lu, D., and G. Zhu (1995) Singapore direct investment in China: features and implications. *ASEAN Economic Bulletin* 12:53–63.

Marden, P. (1992) "Real" regulation reconsidered. *Environment and Planning A* 24:751–67.

Ministry of Finance (1993a) *Interim Report of the Committee to Promote Enterprise Overseas*. Singapore: MOF.

Ministry of Finance (1993b) *Final Report of the Committee to Promote Enterprise Overseas*. Singapore: MOF.

Ministry of Trade and Industry (1986) *The Singapore Economy: New Directions*. Singapore: MTI.

Ministry of Trade and Industry (1991) *Strategic Economic Plan*, Singapore: MTI.

Mirza, H. (1986) *Multinationals and the Growth of the Singapore Economy*. London: Croom Helm.

Moulaert, F., and E. Swyngedouw (1989) Survey 15: a regulation approach to the geography of a flexible production system. *Environment and Planning D: Society and Space* 7: 327–345.

Moulaert, F., and E. Swyngedouw (1992) Accumulation and organization in computer and communications industries: a regulationist approach. In P. Cooke, F. Moulaert, E. Swyngedouw, O. Weinstein, and P. Wells, *Towards*

Global Localization: The Computing and Telecommunications Industries in Britain and France. London: UCL Press, pp. 39–60.
Munday, M., J. Morris, and B. Wilkinson (1995) Factories or warehouses? A Welsh perspective on Japanese transplant manufacturing. *Regional Studies* 29:1–17.
Murray, R. (1971) The internationalization of capital and the nation state. *New Left Review* 67:84–108.
Palloix, C. (1975) The internationalisation of capital and the circuit of social capital. In H. Radice (Ed.) *International Firms and Modern Imperialism: Selected Readings*. Harmondsworth, Eng.: Penguin, pp. 63–88.
Palloix, C. (1977) The self-expansion of capital on a world scale. *Review of Radical Political Economics* 9:1–28.
Parsonage, J. (1992) Southeast Asia's "growth triangle": a subregional response to global transformation. *International Journal of Urban and Regional Research* 16: 307–17.
Peck, J.A. (1992) Labor and agglomeration: control and flexibility in local labor markets. *Economic Geography* 68:325–347.
Peck, J.A. (1994) Regulating labour: the social regulation and reproduction of local labour-markets. In A. Amin and N. Thrift (Eds.) *Globalization, Institutions, and Regional Development in Europe*. Oxford: Oxford University Press, pp. 147–76.
Peck, J.A. (1996) *Work Place: The Social Regulation of Labor Markets*. New York: Guilford.
Peck, J.A., and Y. Miyamachi (1994) Regulating Japan? Regulation theory versus the Japanese experience. *Environment and Planning D: Society and Space* 12: 639–674.
Peck, J.A., and A.T. Tickell (1994) Searching for a new institutional fix: the after-Fordist crisis and the global-local disorder. In A. Amin (Ed.) *Post-Fordism: A Reader*. Oxford: Basil Blackwell, pp. 280–315.
Peck, J.A., and A.T. Tickell (1995) The social regulation of uneven development: "regulatory deficit," England's South East and the collapse of Thatcherism. *Environment and Planning A* 27:15–40.
Perry, M. (1991) The Singapore growth triangle: state, capital and labour at a new frontier in the world economy. *Singapore Journal of Tropical Geography* 12: 138–151.
Perry, M. (1992) Promoting corporate control in Singapore. *Regional Studie*s 26: 289–294.
Perry, M. (1995) New corporate structures, regional offices and Singapore's new economic directions. *Singapore Journal of Tropical Geography* 16:181–196.
Perry, M., L. Kong, and B. Yeoh (1997) *Singapore: A Developmental City-State*. London: John Wiley.
Perry, M., H.W.C. Yeung, and J. Poon (1998) Regional office mobility: the case of corporate control in Singapore and Hong Kong. *Geoforum* 29:237–255.
Porter, M.E. (1990) *The Competitive Advantage of Nations*. London: Macmillan.
Régnier, P. (1991) *Singapore: City-State in Southeast Asia*. Hawaii: University of Hawaii Press.
Régnier, P. (1993) Spreading Singapore's wings worldwide: a review of traditional and new investment strategies. *The Pacific Review* 6:305–312.
Rodan, G. (1989) *The Political Economy of Singapore's Industralization: National State and International Capital*. London: Macmillan.
Smith, A. (1994) Uneven development and the restructuring of the armaments industry in Slovakia. *Transactions of the Institute of British Geographers* 19:404–424.
Smith, A. (1995) Regulation theory, strategies of enterprise integration and the political economy of regional economic restructuring in Central and Eastern Europe: the case of Slovakia. *Regional Studies* 29:761–772.
Speeches, May–June 1993, Singapore: Singapore National Printer. Author n/a.

Storper, M. (1997) *The Regional World: Territorial Development in a Global Economy*. New York: Guilford Press.

Sum, N.L. (1998) Theorizing export-oriented economic development in East Asian Newly-Industrializing countries: a regulationist perspective. In I.G. Cook, M.A. Doel, R.Y.F. Li, and Y. Wang (Eds.) *Dynamic Asia: Business, Trade and Economic Development in Pacific Asia*. Aldershot: Ashgate, pp. 41–77.

Tan, C.H. (1995) *Venturing Overseas: Singapore's External Wing*. Singapore: McGraw-Hill.

Tan, H. (1991) State capitalism, multi-national corporations and Chinese entrepreneurship in Singapore. In G.G. Hamilton (Ed.) *Business Networks and Economic Development in East and South East Asia*. Hong Kong: Centre of Asian Studies, University of Hong Kong, pp. 201–216.

Tickell, A.T., and J.A. Peck (1992) Accumulation, regulation and the geographies of post-Fordism: missing links in regulationist research. *Progress in Human Geography* 16:190–218.

Tremewan, C. (1994) *The Political Economy of Social Control in Singapore*. London: Macmillan.

Turok, I. (1993) Inward investment and local linkages: how deeply embedded is "Silicon Glen"? *Regional Studies* 27:401–417.

UNCTAD (1996) *Transnational Corporations and World Development*. London: International Thomson Business Press.

Wade, R. (1990) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Princeton: Princeton University Press.

Walker, R. (1995) Regulation and flexible specialization as theories of capitalist development: challengers to Marx and Schumpeter? In H. Liggett and D. Perry (Eds.) *Spatial Practices: Critical Explorations in Social/Spatial Theory*. Thousand Oaks, CA: Sage, pp. 167–208.

Webber, M. (1998) Profitability and growth in multiregion systems: interpreting the growth of Japan. *Environment and Planning A* 30:415–37.

Whitley, R. (1992) *Business Systems in East Asia: Firms, Markets and Societies*. London: Sage.

Williamson, O.E. (1975) *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: The Free Press.

Williamson, O.E. (1985) *The Economic Institution of Capitalism*. New York: The Free Press.

Wills, K.D., and B. Yeoh (1998) The social sustainability of Singapore's regionalisation drive. *Third World Planning Review* 20:203–21.

Yeung, H.W.C. (1994) Transnational corporations from Asian developing countries: their characteristics and competitive edge. *Journal of Asian Business* 10: 17–58.

Yeung, H.W.C. (1996) The historical geography of Hong Kong investments in the ASEAN region. *Singapore Journal of Tropical Geography* 17:66–82.

Yeung, H.W.C. (1997) Business networks and transnational corporations: a study of Hong Kong firms in the ASEAN region. *Economic Geography* 73:1–25.

Yeung, H.W.C. (1998a) Capital, state and space: contesting the borderless world. *Transactions of the Institute of British Geographers* 23:291–309.

Yeung, H.W.C. (1998b) The social-spatial constitution of business organisations: a geographical perspective. *Organization* 5:101–28.

Yeung, H.W.C. (1998c) *Transnational Corporations and Business Networks: Hong Kong Firms in the ASEAN Region*. London: Routledge.

Yeung, H.W.C. (1998d) The political economy of transnational corporations: a study of the regionalisation of Singaporean firms. *Political Geography* 17: 389–416.

Yeung, H.W.C. (1998e) Competing for transnational corporations? The regional operations of foreign firms in Hong Kong and Singapore. In I.G. Cook, M.A. Doel, R.Y.F. Li and Y. Wang (Eds.) *Dynamic Asia: Business, Trade and Economic Development in Pacific Asia*. Aldershot: Ashgate, pp. 78–119.

Yeung, H.W.C. (1998f) Transnational economic synergy and business networks: the case of two-way investment between Malaysia and Singapore. *Regional Studies* 32:687–706.

Yeung, H.W.C. (Ed.) (1999a) *The Globalisation of Business Firms from Emerging Economies*. Cheltenham: Edward Elgar.

Yeung, H.W.C. (1999b) Neoliberalism, laissez-faire capitalism and economic crisis: the political economy of deindustrialisation in Hong Kong. *Competition and Change* 4:1–49.

Yeung, H.W.C. (1999c) *The Political Economy of Singaporean Investments in China*. EAI Working Paper No. 22, East Asia Institute, National University of Singapore, Singapore.

Yoshihara, K. (1976) *Foreign Investment and Domestic Response: A Study of Singapore's Industrialization*. Singapore: Eastern University Press.