

Enhancing The Opportunities of SMEs

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INTRODUCTION

SMEs have played an important role in Penang's economy since 1970s when multinationals (MNC) established their operations in the state. SMEs had been servicing MNCs in various capacities (Global Supplier Programme and Service Suppliers Programme)¹.

Although SMEs represent more than 90 percent of commercial establishments, SMEs only contribute to 46 percent of the national output.² With proper support, SMEs will be able to increase their economic participation more effectively. The Government will continue to implement incentives for the SMEs. They include improving access to funding through SMEs Bank and providing seed funding for newly established SMEs. Specific programmes will be introduced to strengthen cooperation and linkage between SMEs and large domestic companies as well as multinational corporations (MNCs). Effort will also be concentrated on enhancing entrepreneurial and technical capabilities of SMEs through the 9th Malaysian Plan.

Two criteria have been used for SMEs definitions, namely one based on number of employees and other on sales turnover. Therefore, an enterprise will be classified as an SME if it meets either the specified number of employees or the annual sales turnover specified. The definition will apply for primary agriculture, manufacturing (including agro-based) and related services and other services (including information and communication technology). SMEs definition as shown in Table 1 and 2 below.

Table 1: SME definition based on number of employees

| Sector / Size | Primary Agriculture | Manufacturing Agriculture | Services |
|---------------|---------------------|---------------------------|-------------|
| Micro | Less than 5 | Less than 5 | Less than 5 |
| Small | 5 and 19 | 5 and 50 | 5 and 19 |
| Medium | 20 and 50 | 51 and 150 | 20 and 50 |

Source : SMEinfo

¹ BERNAMA News, May 22,2006
² 9th Malaysian Plan

Table 2 : SME definition based on annual turnover

| Sector / Size | Primary Agriculture | Manufacturing Agriculture | Services |
|---------------|-------------------------|---------------------------|-------------------------|
| Micro | Less than RM 200,000 | Less than RM 250,000 | Less than RM 200,000 |
| Small | RM 200,000 and RM 1 mil | RM 250,000 and RM 10 mil | RM 200,000 and RM 1 mil |
| Medium | RM 1 mil and RM 5 mil | RM 10 mil and RM 25 mil | RM 1 mil and RM 5 mil |

Source : SMEinfo

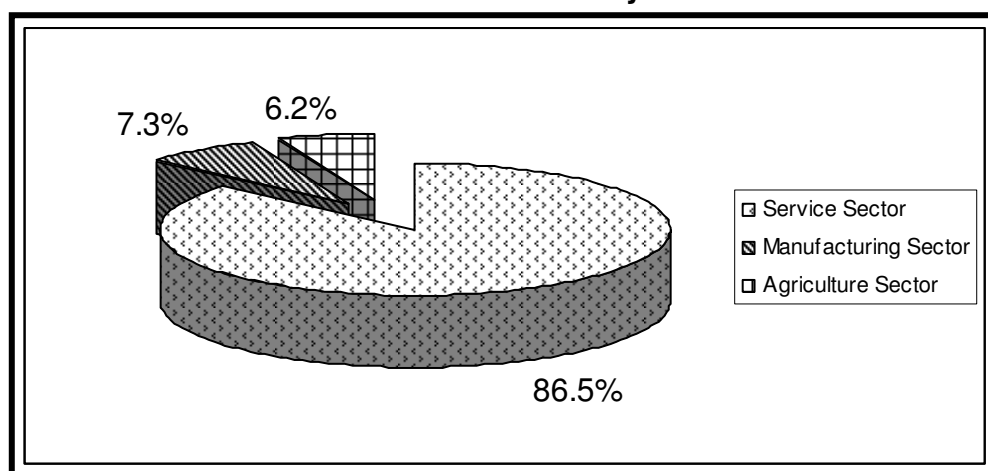


During the Sixth National SME Development Council which were held in January, 2007, concerns were raised by the Prime Minister regarding SMEs' access to loans. The council approved 190 key programmes for SME development, with RM3.7bil already being committed. Of the number approved under the programme, 134 were aimed at building the capacity of SMEs. About 110,000 SMEs were expected to receive a total of RM51bil in loans from financial institutions. This would account for about 37,000 loans to be approved in total under the various Government schemes.³

SMEs STATUS AND PERFORMANCE

Most of the SMEs identified are in the services sector (86.5%) and about 449,004 of them are mainly engaged in retail, restaurant, wholesale, transportation, communication and professional services. Around 37,866 SMEs are in the manufacturing sector (7.3%), mainly in the textile and apparel, metal and mineral products and food and beverages industries. While, around 32,126 of SME are involved in the agriculture sector (6.2%), mostly in food crops, markets produce, horticulture and livestock. Chart 1 shows the share in percentage.

Chart 1 : SMEs Divisions by Sector



Source: The SME Annual Report 2005, Bank Negara

³ The STAR, 20th January, 2007

Under the 9MP, greater financial accessibility will be provided to help SMEs development. Malaysian SMEs can seek financing from various types of financial institutions, including bank, development financial institutions, leasing, factoring companies and venture capital. In this rapidly changing global economy, SMEs are contributing significantly to the nation's economic growth. Financial institutions are indeed playing a promising role to assist the growth of SMEs. The development of diverse and competitive SMEs is crucial for creating resilience and achievement towards growth.

There are several forms of financial assistants or loans provided by the financial institutions identified to enhance the growth of SMEs. Around 213 key programmes were implemented in 2006, involving total expenditure of RM7.8 billion. The idea was to enhance the capability and capacity of SMEs in several areas of entrepreneurship development, marketing and promotion as well as product and technology development. More than 287,000 SMEs benefited from these initiatives. The major players were women entrepreneurs, graduates and students, about 128,000 of them received entrepreneurship and technical training. In the first eleven months of 2006, a total of RM42.3 billion of financial assistance was approved by the banking and development financial institutions to more than 95,000 SMEs, compare to 2005 where only 90,000 SMEs benefited from such scheme.⁴



SMEs are identified as the major source of employment, providing jobs for over 3 million workers (65.1% of the total employment) in these business establishments. About 2.2 million workers were employed by SMEs in the service sector, 740,000 workers in the manufacturing and the rest (around 131,000 workers) is in the agriculture sector.⁵

ISSUES AND CHALLENGES TO PROMOTE SMEs DEVELOPMENT

Strengthening of infrastructure for development will help to create an enabling environment to support the growth of SMEs. The establishment of on-line portals and business directories such as the SMEinfo portal, FAMAXchange, Agribazaar and HRD Portal, plays an important role to facilitate and increase the outreach of informations to SMEs.

Enhancing the capacity and capability of SMEs require improvement to marketing and promotions. The Government provides both financial and non financial support to enhance those activities. In order to assist SMEs, several programmes have been identified, such as, Market Development Grant, Industrial Linkage Programme and Local Market Expansion Programme. For promotion of agriculture products, a special grant has been introduced, which is, Brand Promotion Grant and Malaysia's Best.⁶

Training and Human Resource Development is also important to SMEs. They need to train their workers and undertake skills upgrading. Human Resource Development Berhad (PSMB) was appointed to train and coordinate several schemes specifically for SMEs workers. Apart from that, advisory services with emphasis on business and financial services have also been provided. State Bank offers comprehensive financial services to SMEs through LINK (Laman Informasi, Nasihat dan Khidmat). It also assists SMEs to restructure their non-

⁴ National SME Development Blueprint 2007

⁵ Website: www.bnm.gov.my

⁶ Website: www.bnm.gov.my

performing loans through Small Debt Resolution Scheme. Under the HRD Fund (Human Resource Development Fund) the companies can apply for the fund they have contributed for training and up skilling their workforce.

SMIDEC has continued to offer advisory services and it has played an important part in providing assistance to SMEs through SME Expert Advisory Panel which aimed to provide technical assistance in improving SMEs efficiency, productivity and technology capabilities.

BARRIERS TO SMEs



Gaining international business opportunities and access to world market are by far the most critical barriers identified. Limitation of time, competency and financial resources available are often the reasons for SMEs to identify and pursue new market opportunities. Lack of knowledge on the best way to enter or to make the greatest use of commercial engagements in the market is another known barrier. SMEs may decide not to take up certain opportunities, or they may take an approach which ends up being unsuccessful.

The ability to reach out to the right customer is a problem for any business seeking to enter an unfamiliar market. Reaching out to produce right product or services to the right customer at the right timing can be challenging issues to the SMEs, especially to the new players in the market. This situation occurs due to the nature of the market. Competition is sharpen when SMEs are among the giant players in the market.

Failing to reinvest the profit gained today, poor management in people and time, retain the old methods culture, little adaptation of latest technology, lack of long term foresight or lack of innovation in the product and services provided are the key barriers to success of SMEs. These should be overcome to create a competitive and secure environment for the SMEs to conduct their business transactions more actively.

RECOMMENDATIONS FOR FUTURE GROWTH OF SMEs

In order to open up greater opportunities for SMEs to grow, the government and the private organisation should help the new and growing SMEs. Government must recognise that the needs of the SMEs may differ according to the experience and duration of operation of each firm.

Easy access to financial support and fast approvals would definitely boost the SME market. Due to high competitive in the market, especially among the old and gigantic players, it is hard for the newly established SMEs to obtain financial assistance. New rules and overwhelming regulations are too often quoted by the newly established SMEs as obstacles to their application for assistance. By reducing the rules and regulations stated by the financial institutions will reduce the burden and encourage new entrepreneurs to venture out.

Ensuring high quality product and services can boost the SMEs market in the future. The adaptation of latest technology, incorporating ICT and MNC will provide extra features to the products and services provided. Encouraging co-operation and networking amongst SMEs or between larger firms, so that the experience can be shared and this will enhance the business opportunities. Co-operation between SMEs and MNC should be encouraged.

Supporting forums in which government officials can diffuse and publish best policy practices for the SMEs should be enhanced. These forums, seminars, road shows and workshops will assist SMEs to be ready to access to any market both local and international. Furthermore, it will develop high quality, transparent and efficient business resolutions. This market information can be shared among the SMEs.

Enhancing the development of portals and websites that provide business opportunities for SMEs at minimal cost should be encouraged. Providing programmes to assist SMEs to access funding opportunities for entries into new markets are essential. The use of E-commerce as a tool for overcoming distance to markets, for reducing cost of compliance with government regulations, and for encouraging information flow for better business practices.

At the state level, promoting SMEs cluster would be encouraged so that these sectors can develop a strong base to overcome problems associated with lack of resources and experience. The State will encourage investments and SMEs venture into higher value added activities such as more adoption of ICT and automation. Such initiatives will be operationalised with the corporation of Small and Medium Industries Development Corporation (SMIDEC) in the future.

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New Industries in Southeast Asia's Late Industrialization:

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ABSTRACT

Discourse on industry development and policy practice in late industrialization countries in East and Southeast Asia has predominantly tended to relate the emergence of new industries to 'creation' by the state and thereby to the role of state intervention or involvement in industrial growth and restructuring. On the other hand the role and position of (local) entrepreneurship in the genesis of new industries has been rather neglected, as little room was accorded to 'autonomous' development. Southeast Asian late industrialization is currently being confronted with the limits of development and expansion of specific (FDI-driven) export industries and thus with the necessity to devise new growth paths in industry (on the basis of high tech industries). This compels a reconsideration of policy practice and perceptions of modes of industry development on which it is based.

In this article we argue that a state-orchestrated '*creation*' of priority industries is not the only possible route to new high tech industries in Southeast Asian late industrialization. Field research into the emergence and development of a recent growth industry in Malaysia, i.e. the manufacturing of automated equipment (or, automation industry) and its constituent firms in the Penang region, demonstrates that the mode of development of this industry conforms rather well to a number of evolutionary economic concepts on firm genesis and development in new industries. This suggests that successful industrial policies can be based on supporting an *evolutionary* 'birth and development' path, i.e. industry genesis and evolution as a more or less autonomous incremental process of the development of firms and their capabilities.

Keywords: industrial policy, late industrialization, automation industry, Malaysia, co-evolution, spin-out, diversification

JEL codes: F23, L25, L26, L52, L64, O12, O53, R11

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INTRODUCTION

Although much of the literature on the emergence of new industries in late industrializing countries in East and Southeast Asia recognizes the possibility of multiple modes of industry development, a common emphasis is on the role of state intervention or involvement in industrial growth and restructuring (Clark & Kim 1995, Deyo et. al. 2001, Jomo & Wah 1999, Jomo 2001, Zysman & Doherty 1995). This in turn is reflected by ubiquitous industrial policy practices in Asian late industrializing countries that underline industry development through guided selective government intervention (Masuyama et. al. 1997, 2001). A vision of the necessity to 'create' industries has moulded 'industrial policy' with a significant predisposition for selective state interventions. This is also inherent in the development of internationally competitive export firms in these countries (Ernst et. al. 1998, Jomo 2003). Especially in the second-generation Asian late industrializing countries this has engendered a circumscribed role and position afforded to (local) entrepreneurship.



Malaysia is no exception to this discursive and actual policy practice (Jomo 1993; Jomo et. al. 1999, 2003; Kanapathy 2001; Rasiah 1993, 1999, 2001a/b/c). At the current juncture, Southeast Asian (Malaysia included) late industrialization is confronted with the limits of sustaining the development/operation of specific export industries, i.e. the path pursued thus far (Rasiah 2001a). This in large part relates to the rise of China, resulting in increased competition in 'traditional' export industries and manifested by relocation processes and increasing difficulties in attracting similar levels of foreign direct investment as in the past. A common response has been a focus on upgrading (restructuring) towards industries that are complementary to rather than in competition with China's export industrial structure. Thus, devising new growth paths in industry, in the hope of catching a 'second wind' on the basis of new - particularly high tech - industries, is high on the agenda in Southeast Asian late industrializing countries. Second, greater indigenization of industry and technology development is also on the agenda.

Strikingly, a continuation of the 'government intervention practice' is clearly discernible in the development of new competitive industries, specifically high tech industries, as well as indigenization. This is reflected in current views and practices as to industrial policy, continuing the significant role accorded to such policy in the predominant line of thinking (Bunnell 2004). Yet, doubts are also expressed as to whether this can and should be necessarily achieved through the modes that have prevailed earlier. Increasingly, there is also recognition of limits to 'East Asian models' of state intervention in achieving a 'remaking' of the industrial structure, as doubts have been raised about possible lock-in effects of modes of industry development (Breznitz 2005, Rasiah 2001a).

This leads to the intriguing question of whether a state-orchestrated 'creation' of new priority industries is the only possible route to new high tech industries in Southeast Asian late industrializing countries, given the existing industrial base. It can be argued that as a matter of fact the development of industries may be conceptualized in different ways, i.e. alternative modes of industry genesis and growth may be identified. For example, besides institutional orchestration there is also market coordination. However, an increasing amount of research into the

evolution of industries, in terms of development path, composition/structure, and geography (at several scale levels), in evolutionary economics (e.g., Boschma & Wenting 2005, Cantner et al., 2004; Dahl et al., 2003; Klepper 2001a, 2001b, 2002) is revealing pathways that deviate substantially from the 'create and grow' belief and practice. Industry genesis and evolution is shown to be a more or less autonomous incremental process of the development of firms, including selection processes through entry and exit, from a range of seedbeds (some related to the existing industry base, some accidental) in particular locations (some equally accidental), and a linked similarly incremental process of capability development. Firms in new industries need not be new firms. Conceptions of the dynamics of entrepreneurship have led to interesting elaborations of evolutionary 'models' of industry development.

Thus, can successful industrial policies be based on an evolutionary 'birth and development' path with respect to the growth of high tech industry, be it nationally or in a specific regional/local complex? The main argument put forward in this contribution holds that an evolutionary industrial policy is possible in industrializing countries, particularly in conjunction and following the establishment of multinational enterprises. With respect to the Malaysian case, as will be demonstrated later, industrial policy has accorded a role to the State that has gone much further than playing a catalytic role in the establishment of a range of export processing industries. However, in contrast to the state's role, we demonstrate the possibility of the development of new high tech industries as an evolutionary process of local firm development without much 'state involvement', at least directly. We do this by analyzing the development of a recent growth industry in Malaysia, i.e. the manufacturing of automated equipment (or, automation industry, formally classified under machinery). More specifically, we report on the development of this industry and its constituent firms in the Penang region, which has become a mature export production complex that in the initial and growth phases of its development was largely driven by foreign direct investment.

The discussion here addresses four questions. First, what have been the forms and achievements of the predominant state-led model of industry 'creation' in late industrialization in Southeast Asian countries and what are the drawbacks in relation to the current agenda of high-tech industry development? Second, how should an evolutionary 'birth and development' process and path with respect to the growth of high-tech industry be conceived? Third, if the automation industry in Penang (and Malaysia at large) is marked by a different development 'mode', more in line with findings from evolutionary economic research, then how does this mode (and path) look like? Fourth, what are the implications for our thinking on 'remaking' late industrialization, specifically the prospects for greater indigenization of industry development?

In the next section we briefly review the first question. This is followed by a brief – and tentative – evolutionary economic account of industry development. In the subsequent section we direct the attention to Malaysia and first outline the rationale for and the different forms of state involvement in export industry development. Here we also show that – while the modes of operation of the state have substantially evolved – its role/involvement has hardly become less. The fourth section outlines the development of the automation industry in the Penang complex. A discussion on the questions raised in this introduction concludes this contribution.

INDUSTRIAL POLICY IN EAST AND SOUTHEAST ASIA

A review of the relevant discourse and literature reveals a significant - and wide array of modes of - state involvement in industry development, driving home the pervasive idea of the 'creation' of industries in a planned and coordinated manner (Masuyama et al. 1997, Masuyama et al. 2001; Jomo & Tan Kock Wah 1999, Jomo 2003). Interplaying with modes of involvement the role of the state is perceived to vary from direct participative (assuming a position as entrepreneur and/or investor) to catalytic in the background. While categorization of modes of involvement is in principle a fairly straightforward task, in practice it is highly complex in view of the often hybrid nature of state selective intervention. An illustration of the latter, and at the same time often-used mode of industry creation, is related to leveraging multinational companies. Mathews (1999) demonstrates Singapore's dual strategy in its creation of a semiconductor industry, not only to attract well-known MNCs in the industry to the city-state but also to leverage them in order to broaden their activities and to grow domestic firms, in part so-called Government Linked Companies (GLCs), specializing in segments of the industry or in support activities. This has inter alia meant inducing MNCs into technology transfer and learning assistance, as well as into linkages with local companies for procurement purposes. The same strategy was replicated in case of the hard disk drive industry (Wong Poh Kam, 1999a, 2001).



Building an industry around foreign firms has constituted one of the favored modes of export industry creation in the second-generation late industrializing countries, mostly involving a substantial role of the state reflected by prioritizing or targeting industries and specific companies, influencing the investment 'climate' and delivering specific needs of targeted industries and companies, undertaking concrete procurement activities, and so on. Another mode deployed has been the building of new industries around large vertically integrated domestic companies whereby the role of the state revolved around targeting (appropriate) industries, picking strong winner firms or investing directly in (shared) ownership, nurturing these by providing them with technology (in part leveraged from abroad) and delivering markets, also setting of performance criteria etc. (Jomo & Tan Kok Wah 1999, Jomo, 2003). State leadership positions have been expressed inter alia in direct state investment in new firms in newly targeted industries (resembling 'picking winners'), through specialized institutional organizations or through large state-owned companies functioning as the investment arm of government, or in programmed processes of co-evolution, often with the direct aim to develop local support industries and local entrepreneurship. Direct government intervention of a leadership and followership kind has been largely absent in the mode whereby new industries have emerged from small-firm-based inter-firm networks and their linkage to public sector research and development institutes. Here, the state limits its involvement to feeding the network with technological knowledge, and promoting spinoff of new local firms constituting new entrants in the industry, enhancing capabilities/competencies etc. (Jomo & Tan Kok Wah 1999, Jomo 2003).

Local-resources-based industry creation has engendered a substantial study of, and led to a wide-ranging discourse on, acquisition processes: endowments in the form of micro- and meso-level technological capabilities, competencies, learning, technology networks and systems, innovation and innovation systems (e.g., Ernst, Ganiatsos & Mytelka 1998, Jomo 2001, Jomo 2003, Lall & Urata 2003, Mathews & Cho 1999, Koh Ai-Tee 1998, Kim 1998, Kim 1999, Kim & Nelson 2000, Kim 2001, Wong Poh Kam 1999b). This approach, focusing on the rise of

domestic firms and industries from birth to having reached a internationally competitive position, highlights micro-economic determinants of performance. Most accounts of technological capability formation and of the accumulation of knowledge, competencies and capabilities in local firms through learning acknowledge a substantial role of the state. From the perspective of industry creation and development the state is seen to operate here in related spheres, either direct interventionist or more catalytic. An interesting contribution to the literature in this vein revolves around the role of relevant institutional characteristics in rapid growth, structural change and industrial progress (Jomo, 2003). In some cases the importance of private institutions that have emerged, such as business associations, to address collective action problems, is highlighted. However, the emphasis is clearly on state institutions at several levels, namely a micro- and meso-oriented competencies view 'necessarily entails a greater appreciation of the role of industrial policy, in the sense of selective pro-active government interventions, as well as other institutional features, such as technological learning and information sharing arrangements, as well as other initiatives to overcome collective action problems' (Jomo, 2003, p. 7). Learning-oriented government-business coordination involve inter alia developing and maintaining close ties between state and individual businesses with transfer of incentives and privileges (foreign acquired technology) to these businesses; devising programmes and playing a guiding role as to linkages between domestic firms and MNC establishments, or between domestic small firms and domestic lead firms (vendor development programs), with a view to developing local support industries and equipping them with the necessary technological knowledge through technology transfer. The emphasis is put on successful technological learning and innovation, enhancing capabilities/competencies, and this remains a task of firms and industries themselves, their capacity to do so is seen to need a - at the least - catalytic or macro-entrepreneurial role of institutions (see also Tae Kyung Sung and Carlsson's, 2003, reconstruction of the development of the machine tools industry in Korea).

Against perceptions of the role of the state in the creation and development of industries as beneficial, recently alternative critical views have emerged that point to limits of a 'developmental state' in its attempts to create new technological industries. For example, Breznitz (2005) in his analysis of two key sectors of Taiwanese IT industry argues that the division of labor between state and private industry at some stage limits the movement of the system to the technological frontier, hampering the further growth of the industry. Besides insufficiently addressing collective action problems, the interaction between institution and private industry has evolved into rivalry (unfair competition) and deviated from collective efficiency. Such an emerging 'lock-in' situation compels a reconsideration of the roles of the state. It can be suggested that the developmental state model is particularly useful in a first phase of industrial development, namely to attract foreign companies and to develop domestic industries. A follow-up stage would benefit more from evolutionary policies based on indigenous entrepreneurship and a further broadening and deepening of local competencies as a process of diversification and spinoff creation.

A BRIEF EVOLUTIONARY ECONOMIC ACCOUNT: MOVING AWAY FROM THE STATE

The dynamics of industries is one of the key areas of study in evolutionary economics. Much of the recent work (summarized in Boschma and Frenken 2003, 2006) has focused on the Product Life Cycle model, or rather the Industry Life Cycle model, dealing with the longer-term evolution of industries after their emergence. The model is frequently used to explain why industries typically transform from an initial situation marked by competition, entry and exit, to an end situation marked by an oligopoly in which only a few large companies dominate the market. The key concepts and 'events' in the model are entry, exit and shakeout, whereby the number of firms in the market, and the number of both entrants and exits follow a typical inverted U-shaped curve. Particularly interesting is the idea of shakeout at an early stage after initial strong growth, due to heterogeneity in the population in terms of characteristics and performance.



Here an evolutionary economic perspective is applied to the process, or rather mechanisms, of entry of companies whereby a new industry is born. The work of Klepper (2001a, 2001b, 2002) identifies several mechanisms, and thus several types of companies: 1) pre-existing firms diversifying from related industries, 2) new firms founded by those who headed firms in these same related industries, 3) new firms founded by employees of incumbent firms in the same industry. The first two categories involve experienced firms or entrepreneurs; the third category may be termed spinoffs. A fourth type is also identified, namely a residual category of inexperienced de novo firms composed of firms founded by capitalists and by lower-level employees in related industries. Klepper (2001a, p. 6) elucidates the sequence in which these different types of firms enter the arena.

Incorporating geography, several researchers (e.g. Klepper 2001a, Boschma & Wenting 2005) have employed a similar 'model', combined with agglomeration economies, to explain the spatial formation of a new industry, i.e. where it is born and how it evolves geographically. Evolutionary concepts such as those outlined are very helpful in understanding (by theoretical prediction) e.g. the monopoly of an industry by a single region (concentration), why a specific industry has developed in a specific region/locale rather than another region/locale, or why during the life course a specific location associated with the birth of an industry remains prominent in its later geographical pattern. Boschma and Wenting (2005, p. 16) found that the initial geography of a new industry is associated with particular regions being much more favorable than others during the first phase of development because already existing closely related activities, offering a local supply of potential entrepreneurs, knowledge externalities and skilled labour that could be readily exploited by entrants in the new industry. It may be noted that there might be a thin line between (explanation of) the spatial formation of a new industry and its initial development as such. In the current article this spatial aspect takes less precedence, although some attention will be paid later on to the aspect of location.

When we consider the (application of the) mechanisms outlined here in the context of second generation late industrializing countries or regions in Southeast Asia, it seems logical to account for earlier phases of FDI-driven and other processes of prior industrial growth under the aegis of government policy. The mechanisms highlighted in an evolutionary account may then be identified as

follows: first, diversification from related industries; second, entry by de novo companies as spinouts from hub firms in the base of MNC establishments that play a role on the demand side; and third, spinoffs from incumbent firms in the same industry. The analysis below of Penang's automation industry aims to identify the occurrence of these mechanisms. We will now consider Malaysia in general.

MALAYSIA AND THE DEVELOPMENT OF NEW INDUSTRIES: THE STATE AND ENTREPRENEURSHIP



Malaysia's manufacturing sector can be divided in three relatively disparate segments, each the result of a different policy period (van Grunsven & van Westen 2000, O'Brien 1993). The most recent is the successful export industry, outward-looking and dominated by foreign firms and focused especially on the production of (consumer) electronics and electrical appliances, including assembly and a range of components. It functions according to global market forces and Malaysian policy responses designed accordingly. Second, there is the import substituting industry, which has grown since the 1970s thanks to a booming economy. It is dominated by joint ventures between local partners and foreign brands providing capital and technology. Its operations reflect a domestic policy framework, as these industries continue to be protected from foreign competition, though increasingly less as further liberalization is envisaged under regional (ASEAN and its free trade area, AFTA) and international (GATT/WTO) provisions. Finally, there are the industries processing local natural resources for export. This sub-sector, much of it in Malaysian hands, is a varied one.

This segmentation can be associated with Malaysia's industrial policy, that by the mid-2000s had followed five phases with alternating emphasis on import substitution and export orientation. In these five phases a number of new manufacturing industries emerged. The literature reveals a leading/initiating role of a confident and activist state, in spite of a reliance on market forces (Jomo 1993, Kanapathy 2001, van Grunsven & van Westen 2000, MITI 1996). As indeed in many East Asian 'developmental states', an economy based on private enterprises has never meant a laissez-faire policy. Bunnell (2004) in this context refers to the concept of industrial developmentalism, expressed in several modes of state intervention in the emergence of new industries being readily evident. In growing export industries, following the example of Singapore, Malaysia offered a production platform for international markets to international capital seeking to lower production costs. The main forms of intervention introduced to that effect included tax incentive packages for exports, administered under the Malaysia Industrial Development Authority (MIDA); amendments to labour legislation facilitating the supply of labour and controlling its cost; and the creation of Export Processing Zones (Free Trade Zones Act 1971). In fostering import-substituting industries, the Malaysian government tried to emulate East-Asian models, especially South Korea's successful 'heavy and chemical industrialization' (HCI) drive of the 1970s. In the context of Malaysia's relatively small economy, heavy industrialization was translated into the creation of production capacity for iron and steel, petrochemicals, engines, and cement, as well as the showpiece: the automotive industry and famous 'National Car Project', Proton. Faced with unfavourable market prospects for such plants (massive investment requirements, long gestation periods, limited domestic market and dim prospects of exporting to competitive international markets), these ventures required protected domestic

markets, and led the state to take a lead role in their realization through the creation of a public enterprises system.

This developmentalism can be understood from a range of factors. The imperatives related to level of economic development, economic and industrial structure, have to some extent been 'overshadowed' by ethnic 'Bumiputeraist' imperatives (Bunnell, 2004). Since 1970 industrial policy has been framed by the New Economic Policy (NEP) setting out two major objectives that have since guided Malaysian policies and politics, namely the reduction of poverty, and the de-linking of occupation with ethnic affiliation. A heavy reliance was placed on inducing foreign investment to spur export-oriented industrialization. While recognizing the possibility of producing an economy in which foreign companies would play a pivotal role, more important was the creation of employment in urban-industrial sectors for Malay workers. There was a necessity to rectify unbalanced equity ownership and managerial/professional positioning in the economy of different domestic ethnic groups, again with an emphasis on increasing the stake of Malays. One way to do this was the creation of new industries through a direct state entrepreneurial role. The national car project and its lead firm Proton, should also be interpreted in this context, i.e. the development of a Malay class of managers and professionals. Linked vendor programmes provided an opportunity to create a support industry in which it was thought that Bumiputera entrepreneurship in the SMI sector could be fostered. It is relevant to note in this context that at this stage, industrial developmentalism addressed the issue of ownership and management rather than technological capability. Policy reveals the main mechanism at this juncture for overcoming this constraint, namely foreign technological leverage through engaging in joint ventures with main foreign producers or buying over foreign companies. This applied only to the lead companies; it appears that capability development in small firms remained rather fragmented, casting doubts on the contribution of the ethnic imperative to economic welfare (see later).



As outlined by Bunnell (2004), from the mid-1980s the climate for 'Bumiputeraism' changed giving an opportunity to Prime Minister Mahathir to follow convictions that were to some extent antithetical to what had become the mainstream. It resulted in a shift in emphasis in the National Development Policy (NDP) that succeeded the NEP in 1990. While ownership and management objectives were moderated, entrepreneurial drive coupled with performance based on competencies were made more prominent. Following the introduction of the NDP (and the associated 'Vision 2020' in which Mahathir himself spelt out the parameters of Malaysian economy and society into the next century) a set of - partly new partly familiar - core tenets came to the fore as the foundation for the country's progress. These involved a 'revolutionize to modernity' drive linking to the global economy, the necessity to move beyond mere production into activities and areas where technological and innovative capability would become essential necessitating a technology and innovation push; also, an increasing 'indigenization' of industry and firm development. What remained was the conviction that taking a state-planned road would give most guarantees for reaching the targets (related to inter alia Vision 2020). Rather than a gradual retreat of the state, this therefore implied the continuation of industrial developmentalism beyond the mid-1990s.

These tenets have taken on more concrete form in the Second and Third Industrial Master Plans (IMP2 & 3). Emphasizing high-tech industries -

centrepieces are the multimedia and IT industry and the associated Multimedia Super Corridor project launched in a big media blitz in 1996 (Bunuel 2004) - the modus operandi of the state took a departure from earlier modes. A public enterprises system to spearhead a new industry was no longer deployed. The government actually stepped up its involvement in the push for the development of technology-intensive industries (such as IT and multimedia) but through alternative means. These reflected the shift of its role towards catalyst and regulator, focusing on government-business coordination, promotion, solving collective action problems by collective efficiency-based inter-firm networks, and acting on the 'environmental conditions'. Concrete choices and actions reflected the above-mentioned tenets of advancing 'modernity', indigenisation, and so on.

Related to existing and targeted industries, a 'macro-entrepreneurial' role was directed to developing a more comprehensive technological system (Jomo, Felker & Rasiah, 1999; Jomo & Felker 1999, Rasiah 2003). Here the state directed its efforts at reinforcing existing and establishing new public technology institutions, hoping to lure local entrepreneurship and the managerial and professional class (especially Bumiputera) into higher-risk high-tech areas. A similar aim underpinned the state's effort at providing physical and support infrastructure. The best illustration of the state influencing environmental conditions - in the prioritization of 'high-tech', modernity and indigenization - and thus the state's 'new' philosophy of its role, is the effort to create an IT and multimedia industry. The deeply planned nature of, and a leader role of the state in this case is brought out in the following: the development of a de novo physical site for the location of companies, huge investment in its equipment with state-of-the-art infrastructure, establishing new public institutions relating to the industry and locating them in the Multimedia Super Corridor, luring specific global lead companies to the Corridor, regulation of entry for local companies by requiring listing as an MSC company involving an approval procedure based on explicit criteria; the granting of incentives once MSC status has been obtained, imposing location in the Corridor as a condition attached to MSC status (thus a planned geography!!); development of an appropriate legal framework for the industry to operate, and so on. Thus, while the MSC project expresses modes of operation of the state in new forms, at the same time its role/ involvement is deeper than in any prior industry creation projects.

Mention should be made of systemic coordination in the local 'embedding' of lead MNCs that had eluded Malay-sian policy makers but had received some boost from stable industries (while at the same time being affected by relocating ones). This remained an uneasy affair, largely because of the ethnic factor. Existing firms in support industries linked to internationally driven clusters revolved mainly around Chinese entrepreneurship. Malay entrepreneurship was not so inclined to link itself to MNC-driven industries as they were constrained by lack of capability (an outcome of the lack of performance standards and monitoring systems). This was less an issue in domestic policy-driven clusters to which it therefore became more attached, aided in addition by institutional programmes.

Less 'Bumiputeraism' did not mean a wholesale move to a level playing field. Government-business coordination in Chinese-dominated support industries remained fraught with difficulties in a number of cases. However, in some locations a more integrated production structure involving Chinese entrepreneurship emerged, with more local linkages and a larger part of the value chain concentrated within the locality, leading to further development of locally owned firms. Notably one such location was Penang. Rasiah (1999, 2001b, 2001c; 2002) points to the significant role of systemic coordination in this instance, made possible by

convergence between local state (a Chinese-dominated state government), foreign companies (with localized Chinese management) and local Chinese business. As we shall see later, this has been significant to the development of Penang's automation industry.

Rhetoric (on 'free enterprise', economic competition, and 'standing on your own feet' through learning) and the performance of Chinese enterprise notwithstanding, private non-Bumiputera firms are still rarely recognized as having the potential to move to a 'lead role'. The limits to 'extensive' growth and to the attraction of foreign capital are increasingly recognized, and there is an unmistakable indigenization effort. Well-informed observers (e.g. Jomo K.S., Rajah Rasiah) do agree that the role of the state has produced positive welfare effects. But the state is also criticized for unproductive use of state resources. Although policy initiatives have also started to take the form of public/private collaborative efforts and new Malaysian-owned businesses have been spawned from privatizing government corporations, the focus has been on Bumiputera entrepreneurship that had to be provided with the means to operate, not necessarily involving capabilities. A main outcome, peculiar perhaps to the Malaysian domestic context, has been an enduring relationship of dependence between Malay enterprise and the state. Also, underperformance of the former became endemic, relating to the lack of performance standards, monitoring and appraisal mechanisms (see also Henderson and Phillips, 2007). In addition, substantial leakages have occurred because of opportunities for rent seeking and actual rent dissipation in large volume. Notwithstanding recent performance improvements under an altered regime, ambivalence has continued to prevail as to a significant role assigned to 'indigenous' or locally-owned firms of non-Bumiputera origin in Malaysia's economy, other than as local supporting industries.



We may observe however that the perception of 'suppliers at best' and as a consequence little government attention have not hampered the development of such local enterprise to a level of taking the lead in the formation of new industries that had not been specifically targeted by government policy and yet that constitute a useful segment in the industrial structure. Going against some of the official assumptions, ironically, the counter side of state direction of new industrial development with specific targets is the 'state-less' evolution of new industry, with a degree of private sector direction that has obstructed heavy government involvement. The following account of the automation industry reveals some of the mechanics behind the alternative development path (to be continued in Part 2 – "The Automation Industry in the Penang Complex").

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International Headlines

British Pound Breaks Through

The Associated Press, 17th April, 2007

The British pound broke through the \$2 mark for the first time in nearly 15 years after new data showed an unexpected surge in inflation, prompting speculation of interest rate increases. The pound was at its highest level since 1992. The rising CPI rate, well above the Bank of England's target of 2 percent, adds pressure for a further rise in official interest rates, which are currently at 5.25 percent. Rise in inflation partly reflected an 'unexpectedly sharp' increase in domestic energy prices during the second half of last year and a rise in food prices caused by a weather-induced global reduction in supply. Inflation was also supported by increased spending and business confidence. Tourism operators said there may be an increase in bookings to the United States, with shopping breaks in New York proving popular past time when the pound flirted with the \$2 level in November last year. Conversely, Britain will become more expensive for U.S. tourists, but economists point out that the euro is also weak against the dollar and local travel agencies do not expect to see a large drop in visitors given the currency has been hovering near \$2 for several months. The pound reached its highest levels since before Britain was forced to leave the system that pegged the pound to the currencies of other EU members after currency speculators drove it out of its allowed range.

Retail Sales of Hotel, Catering Sectors in China up in First Quarter

Xinhua News Agency, 21st April, 2007

China's retail sales in the hotel and catering sector rose 17.4 percent year on year to hit 298.36 billion yuan (US\$37.3 billion) in the first three months of 2007. Figures showed that retail sales from the hotel and catering sector accounted for 14.1 percent of the country's total retail sales of consumer goods during the same period. Statistics also showed the number of newly approved foreign-funded hotels and catering projects drop 22.3 percent year-on-year to 171, with contracted foreign investments totaling US\$380 million, down 28.1 percent. Actualized foreign investment increased 5.4 percent to US\$190 million. The ministry forecast that the retail sales of China's catering sector would hit 1.21 trillion yuan this year.

India IT exports touched \$850m

Gulfnews.com, 25th April, 2007

IT exports from India to the UAE (United Arab Emirates) are expected to soar 56.74 per cent from \$542.32 million during 2005-06 to \$850 million in 2007-08. Exports from India to other parts of the world are expected to surge to \$35 billion in 2007-08, up 35.19 per cent from \$25.89 billion in 2005-06. India called the Knowledge Capital of the world, India's IT exports continue their dream run of reaching the entire length and breadth of the Earth, providing total solutions in a host of sectors of the economy. The Indian software industry has brought a paradigm change in the global information technology landscape in recent years. Exports to Europe stood at \$6.63 billion while exports to the US were \$15.33 billion. In further enhancing the services sector, the new Indian trade policy has scrapped service tax on export business and puts emphasis on exports of farm products, handlooms, handicrafts, cottage industries and jewellery. The proposed duty incentives for import of cold storage and refrigerated vans would encourage food stuff exports from India to the UAE.