

***Investment Advisory Series***  
***Series B, number 4***

***Best Practices in Investment  
for Development***

How to create and benefit from FDI-SME Linkages  
Lessons from Malaysia and Singapore



United Nations

**UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT**

**BEST PRACTICES IN  
INVESTMENT FOR  
DEVELOPMENT**

**CASE STUDIES IN FDI**

**How to Create and Benefit from  
FDI-SME Linkages**

**Lessons from Malaysia and Singapore**



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## PREFACE

The *Investment Advisory Series* provides practical advice and case studies of best policy practice for attracting and benefiting from foreign direct investment (FDI), in line with national development strategies. The series draws on the experiences gained in, and lessons learned through, UNCTAD's capacity-building and institution-building work in developing countries and countries with economies in transition.

Series A deals with issues related to investment promotion and facilitation and to the work of investment promotion agencies (IPAs) and other institutions that promote FDI and provide information and services to investors. The publications are intended to be pragmatic, with a how-to focus, and they include toolkits and handbooks. The prime target audience for series A is practitioners in the field of investment promotion and facilitation, mainly in IPAs.

Series B focuses on case studies of best practices in policy and strategic matters related to FDI and development arising from existing and emerging challenges. The primary target audience for series B is policymakers in the field of investment. Other target audiences include civil society, the private sector and international organizations. Series B was launched in response to a call at the 2007 Heiligendamm G-8 Summit for UNCTAD and other international organizations to undertake case studies in making FDI work for development. It analyses practices adopted in selected countries in which investment has contributed to development, with the aim of disseminating best practice experiences to developing countries and countries with economies in transition. The analysis forms the basis of a new technical assistance work programme aimed at helping countries to adopt and adapt best practices in the area of investment policies.

For Series B, UNCTAD's approach is to undertake case studies of a pair of developed and developing or transitional

economies that exhibit elements of best practices in a selected issue. Country selection follows a standard methodology, based primarily on the significant presence of FDI and resulting positive outcomes.

The *Investment Advisory Series* is prepared by a team of UNCTAD staff and consultants in the Investment Policies Branch. This study of the Series B was prepared by John Kline, Edmund Terence Gomez and Shandre Thangavelu. A fact-finding mission was undertaken in Malaysia in July 2009, while the case of Singapore was prepared based on desk research. The report was finalized by Ioanna Liouka and Cam Vidler. Contributions and comments were received from Chantal Dupasquier, Quentin Dupriez, Fulvia Farinelli, Ralf Krueger, Fiorina Mugione, Joerg Weber and Stephen Young. The report has also benefited from views of current and former government officials, the domestic and foreign private sector and academics. Financial support was received from the Asia-Pacific Economic Cooperation forum (APEC) under the APEC-UNCTAD Joint Capacity Building Project for Addressing Knowledge Gaps in the Use of Foreign Direct Investment. The programme has also received financial support from the Government of Germany.

Geneva, June 2011

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## CONTENTS

<b>NOTE</b> .....	<b>ii</b>
<b>PREFACE</b> .....	<b>iii</b>
<b>ABBREVIATIONS</b> .....	<b>ix</b>
<b>TABLE OF FACTS</b> .....	<b>vii</b>
<b>I. INTRODUCTION</b> .....	<b>1</b>
A. FDI-SME linkages.....	2
B. The role of government policy.....	3
C. The case studies .....	4
<b>II. CASE ANALYSIS: MALAYSIA</b> .....	<b>5</b>
A. Country profile and policy context.....	5
B. Development model and role of FDI.....	6
C. SME sector: policies and programmes .....	13
D. FDI-SME linkages: policies and programmes.....	21
E. Conclusion.....	32
<b>III. CASE ANALYSIS: SINGAPORE</b> .....	<b>35</b>
A. Country profile and policy context.....	35
B. Development model and role of FDI.....	36
C. SME sector: policies and programmes .....	39
D. FDI-SME linkages: policies and programmes.....	47
E. Conclusion.....	51
<b>IV. “BEST PRACTICES” LESSONS FOR CREATING     BENEFICIAL FDI-SME LINKAGES</b> .....	<b>53</b>
A. Ensure a favourable business climate for SMEs and TNCs.....	54
B. Strengthen the SME sector .....	56
C. Attract linkage-prone foreign investors .....	67
D. Foster and develop linkages .....	71
<b>V. CONCLUSION</b> .....	<b>77</b>

<b>REFERENCES .....</b>	<b>79</b>
<b>SELECTED UNCTAD PUBLICATIONS ON TRANS- NATIONAL CORPORATION AND FOREIGN DIRECT INVESTMENT .....</b>	<b>83</b>
<b>QUESTIONNAIRE .....</b>	<b>93</b>

### Boxes

Box II.1. Regional development strategies.....	9
Box II.2. Sectoral strategy and new GLCs .....	11
Box II.3. The Malaysian car project and the vendor system .....	23
Box II.4. The ILP and SME-TNC linkages.....	26
Box II.5. The Pengang Skills Development Centre.....	28
Box II.6. The case of Globetronics Technology Berhad .....	30
Box III.1. Enhancing SME innovation capabilities.....	44
Box III.2. Local SME expansion into global electronics .....	47
Box III.3: Early LIUP participants .....	49
Box III.4. Honeywell Aerospace joins LIUP .....	51

### Table

Table II.1. Definition of SMEs.....	14
Table II.2. The Vendor Development Programme (VDP) .....	22
Table II.3. Industrial Linkage Programme (ILP).....	25
Table II.4. Global Supplier Programme (GSP) .....	27
Table III.1. Share of SMEs and large enterprises in Singapore .....	41
Table III.2. The Local Industry Upgrading Programme.....	49

### Figures

Figure II.1. FDI inflows in Malaysia.....	7
Figure III.1 FDI inflows in Singapore .....	38

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**ABBREVIATIONS**

APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
A*STAR	Agency for Science, Technology and Research (Singapore)
CCS	Competition Commission Singapore
CPI	Corruption Perceptions Index
DFI	development finance institution
EDF	Economic Development Board
EOI	export-oriented industrialization
FDI	foreign direct investment
FTZ	free trade zone
GDP	gross domestic product
CGC	Credit Guarantee Corporation Malaysia Berhad
GLC	government-linked company
GSP	Global Supplier Programme
HDC	Halal Industry Development Corporation
HICOM	Heavy Industries Corporation of Malaysia Berhad
HRDB	Human Resource Development Board
HRDF	Human Resource Development Fund
ICT	information and communications technology
ILP	Industrial Linkage Programme
IMP	Industrial Master Plan
ISI	import-substituting industrialization
LIUP	Local Industry Upgrading Programme
MBC	Malaysian Biotechnology Corporation Berhad
MDeC	Multimedia Development Corporation
MIDA	Malaysian Industrial Development Authority
MIDF	Malaysian Industrial Development Finance
MITI	Ministry of International Trade and Industry (Malaysia)
MSC	Multimedia Super Corridor
NEP	New Economic Policy
NSDC	National SME Development Council

PDC	Penang Development Corporation
PFI	participating financial institution
PLE	promising local enterprise
PSDC	Penang Skills Development Centre
R&D	research and development
SME	small and medium enterprise
SME Corp	Small and Medium Enterprise Corporation Malaysia
SMIDEC	Small and Medium Industries Development Corporation
SPRING	Standards, Productivity and Innovation Board
SSIC	Selangor State Investment Centre
TAF	Technology Acquisition Fund
TIP	Technology Innovation Programme
TNC	transnational corporation
VDP	Vendor Development Programme
WTO	World Trade Organization

## MALAYSIA



## SINGAPORE



## KEY FACTS TABLE

	Malaysia			Singapore		
	1981-1990	1991-2000	2001-2010	1981-1990	1991-2000	2001-2010
Population (million)*	18.1	23.3	28.3	3.0	4.0	5.1
Annual GDP growth (%)	4.9	6.1	9.8	6.3	7.3	9.6
GDP per capita (\$)*	2525	4029	8348	12233	23073	42383
GDP by sector (%)						
Services	42	48	48	63	65	70
Manufacturing	21	27	28	27	24	24
Agriculture	19	12	9	1	0.1	0.05
FDI inflows (annual average) (\$ million)	1132	4933	4728	2341	9567	19880
FDI outflows (annual average) (\$ million)	230	1692	6224	409	5030	13647
FDI inflows (% of GDP)	3	6	3.8	10	12	17.9
FDI inflows (% gross fixed capital formation)	10.6	17.8	21.3	28.3	35.1	50.9
Exports of goods and services (% GDP)	57.5	92.7	84.1	175.8	177.3	297
Imports of goods and services (% GDP)	55.1	86.8	69.5	175.2	163.6	258

*Source:* UNCTAD, FDI/TNC database and GlobStat database.

*Note:* Simple annual averages over time period

\* Data are for 1990, 2000 and 2010 only.



## I. INTRODUCTION

Promoting the growth of domestic small and medium-sized enterprises (SMEs) represents an important development objective in most countries for both economic and socio-political reasons. Domestic SME development can increase employment, create local value-added, improve domestic innovation and entrepreneurial capabilities and generate economic growth. Although there are obvious benefits from SME growth, many developing countries lack the resource base or a sufficient market size to foster further internal expansion.

Some specific obstacles to SME growth in these situations may also include the following: *First*, limited access to fund and credit. SME funding is essential not only to cover the start-up, expansion and working capital requirements of SMEs, but also for research and development purposes, as SMEs too often lack assistance for developing new ideas and turning them into marketable products. Yet, the cost of capital is often high-priced for SMEs, particularly in times of economic uncertainty, when lenders tend to be more risk averse. *Second*, deficiencies in human capital and difficulties in establishing the required programmes, both in terms of the overall education system and on-the-job training. For instance, universities and vocational institutions may face challenges to supplying the managerial and technical training programmes needed to support local business operations. *Third*, weak infrastructure with respect to information and communication technologies, transportation and energy, can limit access to markets and erode business revenues. Evidence shows that such constraints, including the digital divide, present particular challenges for SMEs across many business sectors. *Fourth*, limited access to information on prospective markets and clients. Many SMEs have little experience, particularly in becoming suppliers to foreign affiliates or exporting to foreign markets. *Fifth*, the extent of government regulation and compliance costs. These cover many issues ranging from taxation and reporting requirements to laws that promote

occupational health and safety. The cost of complying with national and international standards can be very expensive for SMEs. *Finally*, SMEs are often most vulnerable to economic slowdowns due to higher risk of business failure.

### **A. FDI-SME linkages**

Foreign direct investment (FDI) can enhance local SME development through linkages between foreign affiliates and domestic SMEs. These linkages can take several forms, including backward, forward or horizontal. Backward linkages exist when foreign affiliates acquire goods or services from domestic firms, and forward linkages when foreign affiliates sell goods or services to domestic firms. Horizontal linkages involve interactions between foreign affiliates and domestic firms engaged in competing or complementary activities. This report focuses primarily on backward or linkages.

Linkages offer benefits to foreign affiliates and domestic SMEs as well as to the economy in which they are occurring (Blomström *et al.*, 2000). For affiliates of transnational corporations (TNCs), such benefits may include lowering transaction costs, providing greater flexibility, spurring local adaptations and fostering corporate social responsibility. For local SMEs, potential gains relate to increased local market opportunities, upgraded management skills, benefiting from new technology, facilitating their access to capital and increased possibility of internationalizing their business. For the host economy as a whole, linkages can stimulate economic activity through substituting local inputs for imported ones. The strengthening of domestic firms can in turn lead to spillovers to the rest of the host economy.

Linkage-related benefits to domestic firms and the local economy are not automatic. The ability of a host country to fully

benefit from linkage-related spillovers (i.e. the economy's "absorptive capacity") is determined to a great extent by the technological and managerial capabilities of existing domestic firms. Few spillover benefits will be captured if large "capability gaps" exist. When domestic firms are characterized by weaker capabilities, foreign affiliates often decide to use preferred foreign suppliers within or outside the host country.

## **B. The role of government policy**

Although foreign affiliates may have an interest in creating and strengthening local linkages, their willingness to do so is influenced and reinforced by government policies addressing market failures at different levels of the linkage formation process. In this regard, a multi-faceted and comprehensive approach to building and deepening linkages needs to bring together the public and private sectors in creating linkage opportunities and ensuring their effective implementation. Two major policy areas are relevant for building FDI-SME linkages (UNCTAD, 2006a).

First, the creation of beneficial FDI-SME linkages depends on the capacity to attract a substantial quantity and quality of FDI for the host country. In this regard, the national strategy to promote FDI-SME linkages should be consistent with and supported by all relevant policies to attract higher FDI inflows taking into account the specificity of each country, including factors such as human capital and technological capacity.

Second, strengthening the absorptive capacity of domestic firms is vital to establish linkages and to assimilate efficiently the technology and knowledge that these linkages may provide. Studies have shown that firm-level absorptive capacity depends on the firm's environment. Such an environment is generally characterized by the availability of educated persons with management and engineering skills or the quality of basic (e.g. roads, electricity) and

advanced infrastructure (universities, specialized vocational training centres, diversified financial sector, etc.). Consequently, programmes aimed at developing SME capabilities by supporting technology and innovation, building SME human capital and fostering internationalization capacities, are important.

### **C. The case studies**

This report on “best practices” of how to create and benefit from foreign affiliate – domestic SME linkages assesses both public and private sector factors, including the manner in which they interrelate. Within the context of host country conditions to attract FDI, government objectives, policies and programmes constitute the main public sector elements. International or regional factors as well as actions by the FDI home-country or third countries also play a role. The primary private sector actors are the foreign affiliates themselves and their TNC network along with domestic SMEs. Other significant actors include business associations, universities, research centres and mixed private-public partnerships that can facilitate linkages.

By analyzing the interactive effects of both government and private sector factors in Malaysia and Singapore, useful insights can be derived regarding the circumstances under which different policy and programmatic options can yield the best results. This report identifies strategic policy choices for government and business which could generate the most effective outcomes to benefit domestic SMEs, TNCs, and the host country economy.

## II. CASE ANALYSIS: MALAYSIA

### A. Country profile and policy context

Malaysia's economic objectives and policies have been shaped by the country's political and social context. Malaysia is a constitutional monarchy with a system of federalism where power is divided between a central government and 13 state governments. However, the distribution of power overwhelmingly favours the federal government, thereby providing scope for centralized economic planning. Of Malaysia's almost 27.7 million multi-ethnic inhabitants in 2008, *Bumiputeras*<sup>1</sup> accounted for 65 per cent, while Chinese constituted about 26 and Indians 8 per cent, with additional minor ethnic groups. This multi-ethnic context is important to understand the history of Malaysia's economic development policy.

Despite achieving steady, relatively high economic growth with low inflation for over a decade following independence in 1957, income inequality in Malaysia increased and half the population lived in poverty in 1970. *Bumiputeras* remained disproportionately poor, living largely outside modern urban and corporate sectors. With relatively few entrepreneurs, they were concentrated in low-productivity peasant agriculture and the public sector. These social factors, along with the inequalities in corporate equity distribution among ethnic groups, contributed to riots in May 1969. The resulting New Economic Policy (NEP) of affirmative action, a social and economic response to this crisis, subsequently informed all public policies involving investment in the Malaysian economy, including FDI. One key aspect of the NEP was for *Bumiputeras* to own 30 per cent of corporate equity by 1990. To meet this objective, the government increased state intervention and public sector expenditures. In the corporate sector, the NEP involved targeting a selected group as recipients of government-created concessions to promote the rise of *Bumiputera*-owned conglomerates. Despite positive outcomes in terms of poverty

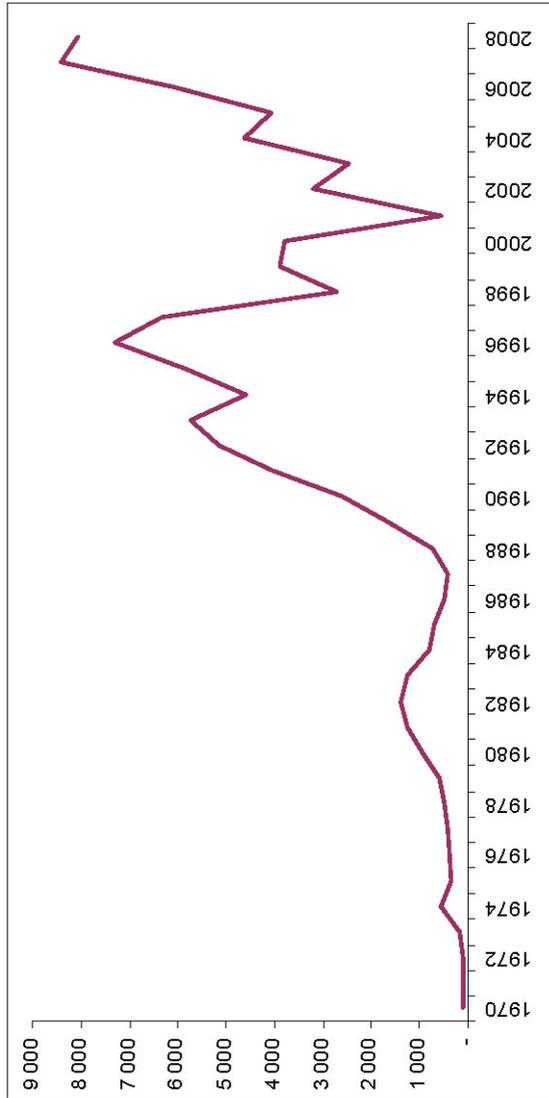
reduction, the policy was criticized as undermining inter-ethnic social cohesion, contributing to new intra-Bumiputera inequalities and inhibiting genuine entrepreneurial capacity, including in the SME sector.

Bumiputera participation in manufacturing projects grew between 1975 and 1985, with equity participation always above 40 per cent (Yasuda, 1991). Yet, this proportion subsequently declined after the government introduced liberalization and deregulation initiatives to address the mid-1980's recession. Although affirmative action policies were reinstated in the early 1990s, pressures associated with the 2009 recession saw the Malaysian Government liberalize the regime once again. Bumiputera equity requirements were removed or reduced in 27 service sub-sectors as well as for foreign companies listed on Malaysian stock exchanges.

## **B. Development model and role of FDI**

Although Malaysia's specific development model has changed over time, FDI has always played a central role. Foreign manufacturing enterprises, especially British concerns, were dominant in the colonial and immediate post-colonial periods. While domestic Chinese investors were also significant over this period, their share of ownership and control of corporate equity was small relative to foreign capital. By 1970, Chinese ownership of manufacturing companies amounted to 22.5 per cent, while foreign enterprises accounted for nearly 75 per cent of the remaining equity. However, by the mid-1980s, the share of equity in Malaysian companies owned by foreigners had fallen significantly, largely due to the expansion of local Chinese businesses. Nonetheless, FDI inflows have grown substantially since the late 1970s (figure II.1).

Figure II.1 FDI inflows in Malaysia (\$ million)



Source: UNCTAD, FDI/TNC database

In the immediate post-colonial period, import-substituting industrialization (ISI) was encouraged through a combination of infrastructure investments and fiscal incentives administered by the Ministry of Commerce and Industry (renamed Ministry of International Trade and Industry - MITI - in 1990), which has since been at the centre of Malaysia's industrial policy. Foreign investors were important beneficiaries of these policies. In the 1960s, FDI made up 50 per cent of total investment in the manufacturing sector. Significant public expenditures were made in the transport, power and communications sectors, often through the creation of industrial estates.

The most important incentive for FDI was tariff protection offered through the 1958 Pioneer Industries Ordinance, which also provided tax allowances to pioneer firms based on the size of their investment. However, despite the promotion of large, capital-intensive industries, most foreign companies participating in ISI merely established subsidiaries for assembling, finishing and packaging goods produced with imported materials for profitable sale within the protected domestic market. The development of indigenous industries remained limited, mainly due to the government's reliance on FDI.

Recognizing the problems associated with ISI in the mid-1960s, the government changed policy direction and began to pursue an export-oriented industrialization (EOI) strategy. Fortuitously, TNCs were beginning to relocate labour-intensive production processes abroad to reduce production costs. A variety of measures relating to tax and export incentives were put in place to reorient the economy and encourage domestic and foreign investment in these industries, while promoting Bumiputera business activities.

One particularly important piece of legislation at the beginning of the EOI period was the Free Trade Zone (FTZ) Act of

1971 (replaced by the Free Zones Act in 1990). It provided companies with pioneer status, involving tax holidays and tariff exemptions to encourage FDI inflows in export-oriented manufacturing. Where FTZs were not established, firms could use licensed manufacturing warehouses with similar privileges, allowing greater flexibility in locating export-oriented factories.

Also important in the early EOI period was the establishment of the Malaysian Industrial Development Authority (MIDA) in 1967, with the aim of encouraging industrial investment, in part by providing incentives and infrastructure to attract FDI. Reporting to the MITI, MIDA has functioned since then as a comprehensive and autonomous investment promotion agency. Regional governments were also active in FDI promotion through the provision of subsidized land, water, electricity and other physical and institutional infrastructure (box II.1).

### **Box II.1. Regional development strategies**

In Malaysia, regional strategies contributed significantly to the attraction of export-oriented manufacturing FDI. This is particularly the case in the electronics and electrical sector promoted by the State of Penang. The Penang Development Corporation (PDC), created in 1969, was effective at creating infrastructure and incentives tailored to particular TNCs. The State also acquired a strong reputation among investors for efficient institutions and effective government leadership. Penang currently houses the offshore operations of TNCs such as Intel, AMD, Motorola, Sony, Agilent Technologies, Seagate and NEC. The PDC and other regional development corporations, such as Selangor State Investment Centre (SSIC), continue to offer a variety of infrastructure, incentives, skill development and research and development (R&D) promotional services.

More recently, Malaysia established five economic growth corridors in various regions of the country, with each corridor designed to

/...

**Box II.1 (concluded)**

draw on regional strengths. These include Iskandar Development Region, Northern Corridor Economic Region, East Coast Economic Region, Sarawak Corridor of Renewable Energy and Sabah Development Corridor.

The growth corridors, administered by regional development authorities which provide investment incentives as well as infrastructure, were seen as a way to reduce the drop in FDI inflows due to the Asian financial crisis in 1997, but also hope to replicate the success of decentralized industrial policy as in the case of Penang.

Although Malaysia has generally followed an EOI strategy since the early 1970s, tariff protection was temporarily reintroduced in the early 1980s. To further encourage the development of key heavy industries, the Malaysian Government encouraged the formation of conglomerates involving TNCs and government-linked companies (GLCs).<sup>2</sup> For example, state-owned Heavy Industries Corporation of Malaysia Berhad (HICOM) collaborated with foreign, mostly Japanese, TNCs in industries ranging from steel and cement production, to the manufacture of a local car, the Proton. However, these efforts were largely unsuccessful, with only the indigenous car industry still under domestic control. With the reduction of tariffs and other import restrictions, the country had reverted to its EOI strategy by the early 1990s.

The EOI strategy was largely successful, as Malaysia experienced significant industrialization and internationalization over this period. By 1993, the manufacturing sector had doubled in size to 30 per cent of GDP (from 13 per cent in 1970), while exports grew from \$1.7 billion in 1970 to \$13.6 billion in 1986.

Since the early 1990s, the service sector has grown significantly in relative terms, with further expansion anticipated in

key sub-sectors relating to Islamic financial products, outsourcing and shared services, and information and communications technology (ICT). In 2003, new importance was placed on commercializing agriculture, recognizing the growing local and foreign demand for foodstuff and the need to increase income in rural areas where poverty remains a serious issue.

A key component of Malaysian economic policy in the 1990s and 2000s has been the use of specialized GLCs to promote sector-level development. As opposed to GLCs involved in direct ownership of enterprises, such as HICOM, these specialized GLCs have been typically focused on servicing the private sector with infrastructure, sector-based incentives, as well as various relevant training and R&D activities (box II.2).

### **Box II.2. Sectoral strategy and new GLCs**

Over the past two decades, there has been a proliferation of GLCs with industry-specific policies and programmes. While owned by the government, these institutions are staffed by industry experts and other specialized private sector professionals. Similar to regional GLCs (e.g. PDC), these institutions typically offer infrastructure, financial incentives, skills and R&D incentives and services as well as administrative and coordinating services to domestic and foreign investors. In addition, these GLCs may engage in technology acquisition in order to distribute it to local firms. They work in cooperation with private sector bodies, public research institutions, and other programmes and objectives set by the MITI and other relevant ministries. Examples include the Malaysian Biotechnology Corporation Berhad (MBC), which aims to maximize returns from the agricultural sector by ensuring value-added in downstream activities, as well as the Halal Industry Development Corporation (HDC), created in 2006, which seeks to make Malaysia a global leader in the production of Halal products.

Perhaps the most significant initiative by a GLC has been the Multimedia SuperCorridor (MSC), which is managed by the Multimedia

/...

**Box II.2 (concluded)**

Development Corporation (MDeC). Created in 1996 to help develop the ICT sector, the MSC is a zone encompassing Kuala Lumpur and including five “Cybercities”. The MSC offers an exceptional package of incentives including a zero corporate tax regime, 100 per cent exemption from taxable statutory income, 100 per cent Investment Tax Allowance, and eligibility for R&D grants. Telecom and utility services come with performance guarantees.

TNCs have commended these and other infrastructure incentives and the Corridor has become a dynamic ICT hub, hosting over 1,200 TNCs and domestic companies that focus on multimedia and communications products, solutions, services and R&D. For example, Dell which had been operating a manufacturing plant in Penang, established an office in Cyberjaya in 2008, occupying a building paid for by the government. This central location in the MSC enables Dell to access MDeC’s services easily and facilitates an “e-supply chain” for managing its branches and suppliers.

Malaysia continues to provide an environment favourable to FDI attraction. The country was ranked by UNCTAD’s World Investment Prospects Survey (2007-2009) among the top 20 most attractive countries for FDI. A key factor that has drawn FDI to Malaysia is the country’s high literacy rates at about 94 per cent, while individuals leaving school to enter the job market have at least 11 years of basic education.

Nevertheless, some constraints remain. A shortage of skilled workers was identified by the World Bank as one of two major challenges for Malaysia’s economy. The second challenge was the regulatory burden on business. For example, an array of government agencies is allowed to exercise broad discretionary powers in approving specific FDI projects. The process has given foreign investors an opportunity to negotiate for attractive conditions, but the complex web of policies and regulations also present time-

consuming obstacles for prospective investors. Malaysia recognized these difficulties and established a high-level committee in 2008, with some recommendations already implemented on matters such as clearing customs and processing expatriate work visas.

### **C. SME sector: policies and programmes**

According to the 2005 census of the corporate sector, SMEs constitute approximately 99.2 per cent of business establishments in Malaysia. The Government has adopted a common definition of SMEs to facilitate identification of such firms in the various sectors and to aid the formulation of policies and programmes to nurture entrepreneurial SMEs. Table II.1 provides the Malaysian Government's SME definition of micro-, small- and medium-sized enterprises, classified by economic sector, based on annual sales turnover or number of full-time employees. Almost 80 per cent of SMEs can be classified as micro-enterprises. A large majority (87 per cent) are in the services sector, compared to 7.2 per cent in manufacturing and 6.2 per cent in agriculture. Nearly 70 per cent of SMEs in the services sector are in wholesale, retail or restaurants. Yet around 26 per cent of SMEs export their products abroad. SMEs employ more than 5.6 million workers and contribute about 32 per cent of real GDP.

Policies related to SMEs have existed throughout Malaysia's development. However, they have traditionally been introduced as components of broader development initiatives, with limited independent attention to specific SME challenges. SME initiatives in the 1980s and early 1990s, for example, focused narrowly on linking local suppliers to foreign affiliates within broader industrial policies.

**Table II.1. Definition of SMEs**

	<b>Micro-enterprise</b>	<b>Small enterprise</b>	<b>Medium enterprise</b>
Manufacturing, manufacturing-related services and agro-based industries	Sales<RM250,000 or Employees<5	RM250,000<Sales < RM10 million or 5<Employees<50	RM10 million <Sales<RM25 million or 51<Employees<150
Services, primary agriculture and ICT	Sales<RM200,000 or Employees<5	RM200,000<Sales < RM1 million or 5<Employees<19	RM1 million< Sales<RM5 million or 20<Employees<50

*Source:* www.smidec.gov.my

It was not until the late 1990s that broad-based SME promotion started to become one of the government's top priorities. In 1996, the Small and Medium Industries Development Corporation (SMIDEC) was created as a specialized agency under the auspices of MITI. In addition to traditional goals of fostering linkages between local and foreign enterprises, SMIDEC was tasked with coordinating the provision of infrastructure facilities, financial assistance, advisory services, market access and other support programmes to SMEs. The SME sector was further prioritized with the creation of the high-level National SME Development Council (NSDC) in 2004, and by its inclusion as a targeted growth area in Malaysia's Third Industrial Master Plan (2006-2020). Most recently, in 2009, SMIDEC was officially transformed into Small and Medium Enterprise Corporation Malaysia (SME Corp). It continues to play SMIDEC's role as coordinator of SME programmes across all related ministries and agencies.

Although it was not always the case, programme eligibility for SMEs is now often determined by a rigorous assessment of their strengths and weaknesses. A streamlined methodology called the SME Competitiveness Rating for Enhancement (SCORE) was developed in Malaysia specifically for this purpose. The system

assigns anywhere from zero to five "stars" to SMEs based on criteria across a range of different capabilities.

Heightened policy attention in more recent years has had a positive effect on the development of the SME sector (NSDC, 2010: 22-28). Until the early 2000s, annual value added growth of SMEs tended to be lower than overall GDP growth. From 2004 to 2008, however, SME output grew at a significantly higher rate than the economy as a whole. This has helped increase the relative role of SMEs in the economy, although by most measures, Malaysia still has a long way to go. For example, Malaysia's SME sector made up only 31 per cent of GDP in 2009, compared to 49 per cent in Korea and Singapore.

### *General SME financing*

Although private capital is available to Malaysian SMEs, the government has made additional efforts to expand financing opportunities. Traditionally, government policy has pressured domestic banks to lend to local SMEs, and certain agencies were created to facilitate the flow of credit. Partly as a result, financing has been relatively affordable. For example, interest rates for SMEs hovered below five per cent from 1998-2005. Current government initiatives seeking to improve access to finance, many of which have emerged since the late 1990s and early 2000s, continue to rely on or complement the domestic banking system. Bank loans make up 90 per cent of total recorded SME financing, and the share of SMEs in total business lending by banks rose from 27 per cent in 1998 to 40 per cent in 2009.

An early example of government cooperation with private banks to finance SMEs is the Credit Guarantee Corporation Malaysia Berhad (CGC), founded in 1972. In 1973, the CGC introduced the Small Loans Guarantee Scheme, which guarantees loans from private financial institutions to small businesses in order

to reduce barriers associated with their lack of collateral. The loans can be used for working capital or capital assets. The CGC has also become involved in other financial products, including SME loans securitization and equity financing. Throughout its existence, the CGC has played a leading role in securing access to finance for local companies. Another new initiative which similarly facilitates access for SMEs to bank loans is the SME Credit Bureau, established in 2008, which acts as a credit databank, providing financial institutions and trade creditors with information about an SME's financial track record to facilitate its access to loans.

Malaysia has also directly provided capital to SMEs through development finance institutions (DFIs), such as Malaysian Industrial Development Finance (MIDF), which manages nine financing initiatives. In 2005, the Government facilitated the creation of SME Bank, which distributes the standard financial services offered by commercial banks, but specializes in SMEs in particular.

Increasingly, government financing of SMEs in Malaysia is being accompanied by advisory services that focus on improving the firm's financial knowledge and strategies. In 2003, Bank Negara, which has played a role in a number of financing schemes, including the CGC and some of the initiatives under MIDF, created the SME Special Unit to provide a central location for SMEs to explore financing options, complete loan applications, and to address problems faced by SMEs without access to finance. Dedicated advisory services are also available on important financial issues. Similarly, the SME Bank has gone beyond its basic bank functions to act as a one-stop shop for SME financial services, including specialized business advisory services to facilitate loan approvals.

Following the onset of the global financial crisis in 2008-2009, the government introduced further financial initiatives to

assist SMEs, including programmes targeted at working capital needs, financing for restructuring, and financing for micro enterprises.

### *Building SME capabilities*

Malaysia has developed a number of policies and programmes to help improve the resources and capabilities of local SMEs. These initiatives relate to building entrepreneurship and human capital, as well as R&D, technological, and product development capabilities. They are offered by a range of government ministries, public agencies and GLCs, and are often related to broader industrial policies. Many are universal, although others are oriented specifically towards promoting capabilities among Bumiputera-owned SMEs.

Entrepreneurship is increasingly encouraged through formal training programmes. For general training, the National Institute for Entrepreneurship operated 449 programmes in 2007, involving some 69,200 participants. Other entrepreneurship or start-up training is targeted at specific industries or SME sectors. For example, MBC's Ignite Programme with Cambridge University employs experts to provide a free "boot camp" for applicants in the biotechnology field to help them refine their business ideas.

Beyond the start-up phase, human capital accumulation in SMEs is encouraged through a variety of on-the-job training and skills development programmes. For example, manufacturing and service SMEs above a certain size can finance staff training from eligible providers through a general Human Resource Development Fund, which levies fees from employers. As many as 28 government ministries and agencies operate training programmes registered through a Human Resources Development Portal. Programmes may focus on technical aspects of certain products or sectors, such as tourism services, or more general skills, such as those related to

exporting. SME Corp also provides grants through the Skills Upgrading Programme to send SME employees to registered regional skill development centres throughout the country, such as the renowned Penang Skill Development Centre (PSDC). These centres provide employee training at the technical and managerial level. In 2007, 2,050 SME employees participated in the Skills Upgrading Programme.

In addition to entrepreneurship and skill development, the Malaysian Government has taken steps to support SMEs with new technologies, innovation, and improvements to firm products and processes. Often, SMEs benefit from broader policy initiatives in these areas, such as MITI's Commercialization of Research and Development Fund, which provides partial grants of up to 50 to 70 per cent of R&D expenditures, including market research, product design and development, standard and regulatory compliance, intellectual property concerns, and demonstration costs. Similarly, SMEs have access to the Technology Acquisition Fund, which provides grants of up to 70 per cent to purchase technology licenses and patent rights.

Targeted regional and sector development initiatives have also helped develop the technological capabilities of SMEs. For example, the city of Cyberjaya within the Multimedia Super Corridor (MSC) has provided a growth environment for Malaysian ICT SMEs, although it is primarily targeted at larger firms and major TNCs. By 2005, only a decade after the MCS was proposed, nearly 74 per cent of the 3,500 SMEs in the ICT sector had achieved MSC-programme-status, which provides access to infrastructure, as well as financial and R&D incentives. By the end of 2008, 444 of the 474 companies located Cyberjaya were Malaysian firms with MSC-status. Nevertheless, the MSC is seen by some SMEs as infrastructure meant primarily for TNCs and large firms, with inadequate provisions for SMEs. For example, SMEs cannot buy

land in the MSC nor is it offered to them, while such privileges are accorded to TNCs.

For SMEs in particular, SME Corp provides matching grants to improve product quality and production processes, including packaging techniques, management and quality certifications, and the development and promotion of halal products, one of Malaysia's identified export targets. In 2007, several hundred SMEs received these grants. Complementing the grants, SME Corp also offers an SME Expert Advisory Panel, which includes over 70 industry experts providing technical assistance to enhance production capabilities.

#### *Promoting SME market expansion*

Several government agencies are involved in programmes that assist promising SMEs to enter foreign markets or expand foreign sales. Some assistance simply provides a platform to display and promote SME products. Examples include SMIDEX, an annual trade show for SMEs, as well as more general MITI-sponsored trade shows and foreign trade missions. Other trade shows focus on more targeted areas, such as the Malaysian International Halal Showcase. Public export-financing schemes are also important tools to encourage SMEs to sell internationally. Aside from standard trade finance offered to most Malaysian firms, MATRADE disperses a series of grants that SMEs can use to develop their export markets.

Franchising provides another avenue for SMEs to expand their markets, and Malaysian government has provided increasingly strong support in this area. This mechanism involves, on the one hand, foreign franchises held by Malaysian firms and, on the other, domestic franchising by Malaysian firms that have established successful ventures abroad. In 1992, the Government established a Franchise Development Division in the Prime Minister's Department, and introduced a long-term plan with related legislation

to regulate the sector. In more recent years, SME Corp and SME Bank have provided direct financial support for franchising through a system of grants. By 2009, 373 franchise systems were registered with the Government, of which two-thirds were homegrown while one-third were foreign franchises.

The retail sector has had particular success within this policy framework. Some 26 homegrown retail franchises already have business ventures in 50 countries. Among the best known franchises are Royal Selangor, a family business founded in 1885 to produce and sell pewter ware. A more recent SME success is Secret Recipe, established in 1997 as a cafe serving fine quality cakes and fusion food, which expanded into outlets throughout Southeast Asia, China, Pakistan and New Zealand.

#### *Programme coordination*

Given the Malaysian Government's recent policy emphasis on promoting SMEs, the level and breadth of programmatic activity, only sampled above, is impressive yet concerning. A wide array of government institutions, agencies and enterprises exercise authority, assume responsibilities, and operate SME promotion programmes in the economic sector they serve. In 2007 alone, there were 189 SME-specific programmes implemented by a combination of 14 ministries and 60 agencies, and benefiting 286,755 SMEs. With too many agencies sponsoring an expansive range of SME programmes, there is little coordination between them regarding the services provided. Not only does this result in wasteful overlap and conflicting objectives, it poses significant administrative barriers to SMEs using these services. For instance, a 2006 survey of more than one hundred SMEs in Selangor found that government policies, and bureaucratic issues in particular, were perceived to be the most significant barriers to SME growth (Saleh *et al.*, 2006).

The Government has recognized the need to create a more efficient and coordinated strategy that will focus resources on prioritized goals, while reducing overlap, red tape, and bureaucratic delays. Part of their response has included establishing specialized agencies to help deliver services more efficiently (e.g. SMIDEC and SME Corp), as well as the creation of SMEinfo, a "one-stop" information portal on SME programmes. The creation of the high-level NSDC has had some success in coordinating the proliferation of programmes within the government.

#### **D. FDI-SME linkages: policies and programmes**

Even before general SME development was prioritized in late 1990s, the government had some experience with policy measures to link foreign affiliates with local suppliers. Early initiatives such as the Vendor Development Programme (VDP) had limited success, primarily due to the limited capacity of the selected local SMEs to meet the needs of TNCs. Subsequent linkage programmes have yielded better results, as they have sought to give TNCs more of a role in supplier selection, and have provided complementary support for SMEs to access finance, build their capabilities, and expand to new markets. Beyond specific linkage programmes, MIDA and SME Corp also maintain databases of domestic SMEs that are made available to foreign investors looking for local partners.

##### *Specific linkage programmes*

By the late 1980s, the government began targeting export-oriented manufacturing FDI by employing a combination of restrictions and incentives to promote the creation and expansion of indigenous conglomerates and local firms, particularly those owned or managed by Bumiputera.

**Table II.2. The Vendor Development Programme (VDP)**

<b>Objective</b>	<ul style="list-style-type: none"> <li>• Provide opportunities for SMEs to participate in subcontracting arrangements and other joint-venture related activities</li> <li>• Develop and strengthen SME performance as manufacturers and suppliers of components, input materials, machinery, parts and supporting services to large corporations and TNCs</li> </ul>
<b>How it works</b>	<ul style="list-style-type: none"> <li>• Vendors supply components and spare parts to the anchor companies - the large local corporations or TNCs operating in Malaysia</li> <li>• In return, the anchor companies are directly involved in the development of the SME, particularly through technology transfer and by providing a stable market</li> <li>• This long-term contract will enable the vendors to grow into large corporations and also penetrate the international market</li> </ul>
<b>Incentives for SMEs</b>	<ul style="list-style-type: none"> <li>• The anchor company provides a market for the SME products and technical facilities to the vendors, such as in the area of training and quality improvement</li> <li>• The government provides soft loans and other types of financial support</li> </ul>
<b>Incentives for TNCs</b>	<ul style="list-style-type: none"> <li>• Anchors do not receive financial assistance under this programme</li> </ul>

*Source:* Masayuki (1999)

A major element of the government's industrial strategy was the Vendor Development Programme (VDP), introduced in 1988 to help local companies emerge as TNC suppliers of industrial components, machinery and equipment (table II.2).<sup>3</sup> The automotive sector was the first to be involved in the VDP. As the programme developed, it broadened its approach to other sectors. For example, a scheme for the electronics industry was introduced under the VDP in 1992. The programme also became less restrictive. Originally exclusive to Bumiputera-owned suppliers, by the mid-1990s, the

program had been extended to all Malaysian firms. With some adjustments to its original structure, the VDP remains an important tool to encourage linkages in Malaysia. In 2005, for instance, the VDP developed 75 vendor companies based on the appointment of three anchor companies.

The most prominent project associated with the VDP was that of the Proton car. Under the VDP, Bumiputera firms were given preferential rights to supply Proton with locally-produced goods. This mechanism proved problematic when the supplied material revealed quality and pricing problems, threatening to undermine the success of the entire car project (box II.3). The vendor system might have produced different results had contracts been issued to companies with the capacity to produce high-quality products at a reasonable price. In fact, since loosening the restrictions on non-Bumiputera companies in the mid-1990s, several Chinese-owned suppliers have experienced success under the VDP. Programmes that specifically target business development policies should ensure that recipients of government concessions can sustain themselves in a competitive environment.

### **Box II.3. The Malaysian car project and the vendor system**

In the early 1980s, state-owned Heavy Industries Corporation of Malaysia Berhad (HICOM) chose Mitsubishi as its initial foreign joint-venture partner in the domestic car project, Proton. The vendor system was introduced in December 1988 as part of the government's attempt to promote Bumiputera involvement in manufacturing. Proton was to serve as an "anchor firm" responsible for cultivating SMEs by using them to supply component parts for the car project. To promote Bumiputera enterprises, these firms were preferentially accorded the rights to supply Proton with locally-produced goods. The vendor system proved unsuccessful in nurturing Bumiputera firms in the automobile industry. However, there is

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**Box II.3 (concluded)**

some evidence that non-Bumiputera companies fared better.

In general, SMEs tied to Proton showed little capacity to enhance their technological skills or develop the ability to serve other companies. Most of these SMEs did not improve the range and quality of their products.

Proton's concern about the quality of products it was receiving from vendors led the company to reduce the volume of goods acquired from favoured SMEs and seek out other suppliers. Inevitably, Proton's original SME vendors found it difficult to grow, given the appreciable increase of component suppliers in the automobile sector. More significantly, the poor quality of goods provided by SME vendors helped saddle Proton model cars whose lower quality image undermined the car project's viability as well as the SMEs' prospects (Shunji, 1998; Leutert and Sudhoff, 1999; Rashid, Lall and Tatsuo, 2008).

The vendor system might have produced different results had contracts been issued on broader merit to companies with better capacity to produce high quality products at a reasonable price. This point is illustrated by the success of local Chinese-owned SME autoparts suppliers to Proton. For example, incorporated in 2000 after the removal of ethnic ownership restrictions, Proreka (M) Sdn Bhd commenced business as a prototype builder and supplier of small plastic automotive parts. The company has since grown into a firm specializing in the design of car components, with total sales of RM50 million in 2007.

Since the mid-1990s, Malaysia has designed other linkage programmes that incorporate more merit-based selection mechanisms, as well as more support for SME capacity-building, often incorporating certain programmes introduced in the previous section. These newer linkage initiatives, notably the Industrial Linkage Programme (ILP) and the Global Supplier Program (GSP), have helped contribute to several examples of successful SME development.

Created in 1996 under the predecessor of SME Corp, the ILP originally promoted selected manufacturing activities, although it is now moving into service industries as well. The programme seeks to build TNC-SME linkages by offering tax incentives to SMEs producing eligible products, as well as to foreign affiliates who incur costs by helping to improve SME capabilities (table II.3). As of 2007, 906 SMEs were registered under the ILP, of which 128 were linked to TNCs and other large companies. One of the ILPs recent successes is the increased sourcing of local food processing SMEs by TNC hypermarkets such as Tesco (box II.4).

**Table II.3. Industrial Linkage Programme (ILP)**

<b>Objective</b>	<ul style="list-style-type: none"> <li>To develop domestic SMEs into competitive manufacturers and suppliers of parts and components and related services to TNCs and large companies</li> </ul>
<b>How it works</b>	<ul style="list-style-type: none"> <li>Matching services supported and enhanced by SMIDEC's existing financial schemes and developmental programmes</li> </ul>
<b>Incentives for SMEs</b>	<ul style="list-style-type: none"> <li>Pioneer Status with tax exemption of 100 per cent on statutory income for 5 years and Investment Tax Allowance of 60 per cent on qualifying capital expenditure incurred within a period of 5 years are provided to eligible SMEs</li> <li>To become qualified for the incentives, SMEs must manufacture products or undertake activities in the List of Promoted Activities and Products in an ILP. They should also be supplying to TNCs or large companies</li> </ul>
<b>Incentives for TNCs</b>	<ul style="list-style-type: none"> <li>Expenses incurred in developing SMEs such as training, product development and testing, factory auditing and technical assistance to ensure the quality of vendors' products will be allowed as deduction in the computation of income tax</li> </ul>

*Source:* SME Information and Advisory Centre

**Box II.4. The ILP and SME-TNC linkages in food processing**

The ILP has been part of the government's efforts to link local food processing SMEs to foreign-owned retailers. These efforts support the government's objective to promote value-added activities in agriculture and agro-business after years of prioritizing industrialization in more heavy and technology-intensive industries. The sourcing of local food products is particularly important considering that many small retail outlets, most of which were supplied by local SMEs, began to lose significant market share when foreign ownership restrictions in the distributive trade sector were relaxed during the mid-1980s. Tesco and Carrefour now account for 60 per cent of retail sales and the survival of food processing SMEs has depended on being able to supply these TNCs.

So far, a number of local food processors have become successful suppliers to these retail TNCs. Tesco, for instance, now relies on Malaysian food processing SMEs for its 31 locations within Malaysia, as well as many located in other countries. As of 2009, over 70 per cent of Tesco Malaysia's 60,000 products are produced locally, and 60 per cent of the company's suppliers are Malaysian SMEs. Once SMEs are taken on as suppliers by Tesco, they benefit from the TNC's targeted efforts to help them meet global standards by producing consistent and quality goods. In addition, Tesco often takes top firms abroad, helping to open markets for them in Europe and the United States.

SME Corp has agreed with Tesco on strict assessment criteria under the ILP, which has helped ensure that linkages are mutually beneficial. In this arrangement, only SMEs that receive three "stars" or above according to their SCORE rating are eligible to become ILP suppliers to Tesco. By late 2009, 49 suppliers had been selected through this system, several of which have become successful house brands.

*Source:* SME Corp.

The GSP funds training and skill development for SMEs in order to make them more effective participants in global supply chains (table II.4). Originally created in 2000 as an initiative by the

regional Penang Skills Development Centre, the GSP was quickly expanded at the country-level by SMIDEC (now SME Corp). Under the GSP, subsidies are provided to SMEs for training programmes at a variety of regional centres and institutes. The key element of the GSP in terms of linkage creation is that TNCs representatives design the content of the training programmes and participants are selected based on TNC criteria. Within its first year, the GSP had already trained 813 employees from 225 SMEs, with the involvement of 23 TNCs or large domestic companies. Intel, for instance, has made significant use of the PSDC and the GSP (box II.5).

**Table II.4. Global Supplier Programme (GSP)**

<b>Objective</b>	<ul style="list-style-type: none"> <li>To develop SMEs into competitive suppliers of parts and components, not only to TNCs in Malaysia, but also their worldwide operations through the mentoring activities and the linkage initiative of the GSP</li> </ul>
<b>How it works</b>	<ul style="list-style-type: none"> <li>Involves training in critical skills with TNC input into curriculum, and SME selection criteria</li> </ul>
<b>Incentives</b>	<ul style="list-style-type: none"> <li>The training initiative is implemented in collaboration with local Skills Development Centers (SME Corp has appointed 42 training providers to undertake skill training for SMEs: e.g. Penang Skills Development Centre</li> <li>SMEs that send their employees for courses at any of the training providers will be eligible for 80 per cent training grant from SMIDEC. Remaining costs may be claimed through the Human Resource Development Fund</li> </ul>

*Source:* SME Information and Advisory Centre.

**Box II.5. The Penang Skills Development Centre and Intel**

Penang has received some of the highest levels of manufacturing FDI in the country, particularly in the electronics and electrical sector. FDI has been used to develop the indigenous industry and SMEs, primarily through providing a market for local machine tool and contract electronics manufacturers. The share of TNC procurement from local sources rose from 10 per cent in the early 1980s to 46 per cent in 1996. By 2007, there were over 3,000 SMEs in Penang.

A widely successful initiative by the State Government and PDC to encourage the development of local suppliers has been the PSDC. Founded in 1989, the Centre brings together TNCs and SMEs in joint-training activities. It is managed by the industry and includes representatives

from TNCs and local SMEs. Membership rose from 25 TNCs and six local supplier firms in 1989 to 56 TNCs and 52 supplier firms in 2005. The close involvement of TNCs in the initial selection of SME suppliers and the design of skill development programmes created specialized SME capacities and facilitated long-term linkages. The Centre's contributions to supplier development inspired the federal-level GSP, which also supported customized SME training based on TNC criteria (and used the Centre as one of its registered training centres).

Intel, present in Penang since 1974, has used these training services, tax incentives and financial support to develop its network of Malaysian suppliers. Notably, Intel created a supplier initiative called the "Smart Approach," based on developing supplier capabilities and competencies and providing business opportunities for SMEs. The company promoted local supplier development through a five-step process: (1) select promising suppliers on the basis of systematic analysis; (2) provide initial training and TNC engagement; (3) allocate business according to capabilities; (4) raise capabilities by technical assistance and training; and (5) help suppliers diversify and develop into global suppliers.

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**Box II.5 (concluded)**

Intel considered that these initiatives benefited TNCs as well as SMEs by shifting the production of low-level components to dependable local firms, allowing the TNCs to concentrate on upgrading and developing new technologies. Intel has helped develop a number of successful Malaysian SMEs, such as LKT Engineering, Eng Teknology, Polytool, Rapid Synergy, Metfab, Prodelcon, Choon Engineering and Globetronics.

*Source:* UNCTAD (2006b).

*TNC initiatives and employee spin-offs*

Many instances of successful linkage creation in Malaysia have occurred outside official policy initiatives. While TNCs typically contact MIDA and SME Corp, where they can receive a list of companies in compatible areas of business, most TNCs also conduct independent research before entering the market, since they often want to identify and choose their local partners. This research is often done based on feasibility studies from consultants to help identify supply chains that can be created with SMEs. Once they have identified partners, TNCs often use internal programmes to help build SME capabilities. Various private business associations and chambers of commerce may also play a role in helping match TNCs with Malaysian firms. These include organizations representing domestic firms and others created along regional and country lines, such as the American Chamber of Commerce, the EU-Malaysia Chamber of Commerce and Industry, and the Japan External Trade Organization.

Another way FDI-SME linkages have been created in the Malaysian context is through the establishment of supplier firms by former TNC employees. Often, their former employer will be their first customer. Unico Holdings Berhad, Eng Teknologi Holdings Berhad and Globetronics Technology Berhad are among the SMEs

owned by ex-employees of TNCs that used such linkages to emerge as major enterprises in the electronics and electrical sector. As illustrated in the case of Globetronics (box II.6), which was formed by ex-Intel employee, TNCs may encourage staff to form new supplier firms and help nurture the company throughout its development and subsequent expansion. However, a potential constraint on former TNC employees serving as a principal FDI-SME link stems from reported differences among TNC management and technology practices. Malaysians can generally hold senior managerial positions in affiliates of TNCs from North America and Europe, gaining valuable operational experience and strategic perspective. By contrast, senior positions in the management hierarchy of firms from Japan are often held exclusively by Japanese managers, limiting the scope of knowledge transfer to local employees. Similarly, TNCs from Europe and North America appear more willing to share and transfer technology with local suppliers (up to a point), than firms from East Asia.

#### **Box II.6 The case of Globetronics Technology Berhad**

The case of Globetronics provides insights into how a domestic SME developed out of its primary links to one TNC. Globetronics was established in 1991 by two former employees of Intel. Together, the founding members had 30 years of experience with Intel. When they established Globetronics, Intel offered them the opportunity to serve as a subcontractor. Intel provided their ex-employees with equipment and facilities to begin their enterprise to ensure that their initial capital outlay would not be too high. Intel also transferred a component of its manufacturing system to Globetronics. Intel ensured, however, that their copyright over this system was not infringed. Another important area of support that Globetronics obtained from Intel was the TNC's certification of quality for their products that were to enter the supply chain network. With Intel's backing, foreign and local firms were willing to work with Globetronics.

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**Box II.6 (continued)**

The new Malaysian firm had little trouble securing financing from banks as Globetronics' business model involved working with Intel.

After developing its capabilities, Globetronics built on this initial support from Intel by diversifying its operations. Globetronics' owners saw this step as a second stage in the firm's expansion. From a single product line, Globetronics used value-added engineering to develop and offer multiple product lines that served a range of customers, including other TNCs. The firm's eventual customers included AMD, Agilent, STM, CREE, Epson, Toshiba and Spansion. Globetronics was aided in broadening its client base by its history of strong links with Intel.

In the company's third stage of growth, Globetronics began to develop unique local capabilities. Globetronics was aware that, while TNCs were willing to teach SMEs certain production methods, there were restrictions on the level and volume of knowledge that would be passed on. Globetronics conceived and executed joint development work with their customers. They shared risks but also had capabilities and core competencies that helped to drive growth. Co-developed products were shared. This practice allowed Globetronics to move up the production and development value chain. In this stage of development, Globetronics assessed that their links with TNCs were more diverse but still crucial, as they were a co-developer of a product with a customer. For this reason, Globetronics focused additional attention on R&D to develop new technologies that will help the firm emerge with a global presence in supplying components for personal computers.

Some facts should be noted from this brief history of Globetronics links with TNCs. Intel outsourced just one item to Globetronics when the latter started operations. It was cheaper for Intel to outsource this item than to continue producing it on its own. Since what Intel outsourced was not new technology, the TNC ran minimal risk in its initial dealing with Globetronics. Intel wanted to focus internal resources on higher value-added production, so transferring low-end manufacturing jobs helped fulfill this goal. Assisting a new SME to become a reliable local supplier of quality components also served Intel's interests.

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**Box II.6 (concluded)**

As Globetronics developed more capabilities and found new customers, the firm loosened its initially tight dependence on Intel's own interests.

The owners of Globetronics acquired the capacity to use and adapt technology when first employed by a TNC and managed to use their knowledge, connections and entrepreneurial talents to nurture a start-up firm in the electronics and electrical sector. This example shows how employment with a TNC can be an important avenue for entrepreneurs who wish to create new SMEs with the capacity to innovate. TNCs such as Intel see mutual benefits arising from contracting out to ex-employees, as opposed to taking on risks with unknown firms. Globetronics' history also shows that new SMEs can develop internal capabilities and eventually expand their customer base beyond solely producing component goods for a former TNC employer.

*Source:* Interviews with Globetronics, July 2009.

**E. Conclusion**

Malaysia's industrial policy acknowledged early on the potential economic benefits of linkages between local SMEs and foreign affiliates. In fact, early measures like the VDP in the 1980s, which sought to link SMEs to foreign companies, preceded more general policy efforts to promote SMEs as a self-standing category of activity. By the late 1990s, SME linkage policies broadened and began to emphasize the importance of SME capacity-building and cooperation between local firms, TNCs and public institutions, particularly in the area of skill development. These principles were reflected in the ILP and GSP, as well as the efforts of SME Corp and its predecessor over the past decade. Although Malaysia's hands-on policy approach provides many examples of successful SME development through linkages with TNCs, its experience also shows limits to policy efforts as well.

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## Notes

- <sup>1</sup> *Bumiputera*, which means ‘sons of the soil’, is the term used in reference to ethnic Malays and other indigenous peoples.
- <sup>2</sup> A government-linked company (GLC) is a corporate entity that may be private or public and to which the government is a stakeholder.
- <sup>3</sup> The VDP complemented the Sub-contractor Exchange Scheme, a database of local companies initiated in 1986 to match local producers with foreign investors according to capabilities and needs.



### **III. CASE ANALYSIS: SINGAPORE**

#### **A. Country profile and policy context**

Singapore is an independent city-state that operates under a parliamentary system of government. Originally a British Crown colony that became self-governing in 1959, Singapore joined the federation of Malaysia in 1963, but left in August 1965 to establish a sovereign republic. One of the most densely populated countries in the world, the country reflects a varied linguistic, cultural and religious heritage, although nearly three-fourths of residents are Chinese. Singapore has a unicameral Parliament headed by a President, but political authority is exercised by a Prime Minister who leads the majority party and a Cabinet appointed by the President on the Prime Minister's advice. The People's Action Party (PAP) has dominated Singapore's politics since the first general election in 1959.

Singapore's rapid growth from a modest trading post to a developed nation is one of the more notable stories of successful growth and development in the second half of the 20th century. The Singapore economy experienced one of the highest rates of growth in the world over the past three decades, with GDP growing at an annual rate of about 7.6 percent during the period 1970-2005. The result in turn propelled Singapore's average real per capita income from \$512 in 1965 to over \$26,982 by 2005, which surpassed the level of many developed countries.

However, long-term averages can hide the vulnerability of the city state to external shocks. Singapore experienced an acute economic contraction in 2001, following the sharp downturn in the global electronics industry and sluggish regional and global growth. A confluence of negative factors exacerbated the recession, including September 11, 2001, Bird flu and SARS, Tsunami, Middle-East war, oil-shocks and the dot.com bubble crash. With manufacturing and services as "twin" engines of the economy, Singapore regained its robustness over the next few years. The most

recent global recession dealt another blow to Singapore's economy. This crisis again raised concerns about the challenges facing Singapore's open, trade-oriented policies and how best to manage the country's essential interdependence with other economies.

## **B. Development model and role of FDI**

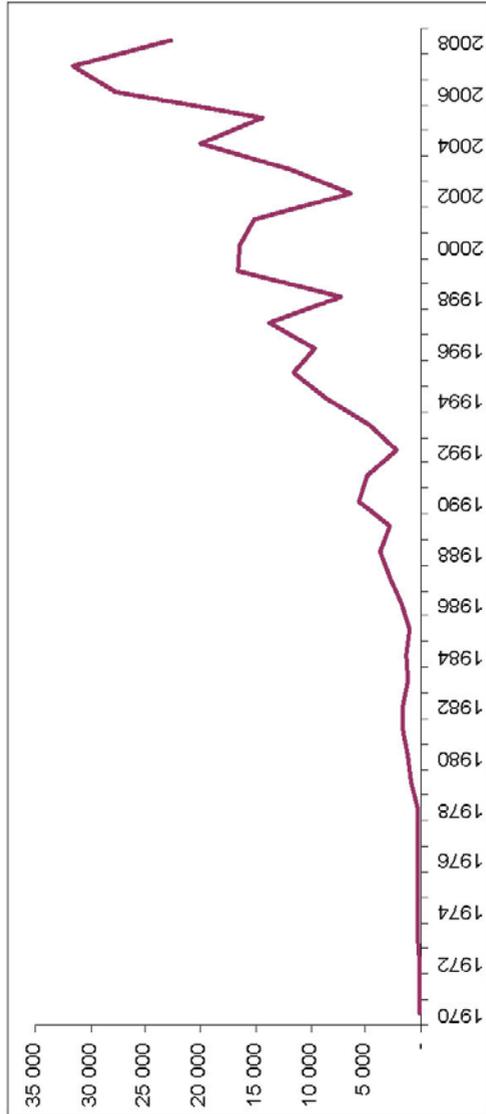
The Singapore Government actively encouraged FDI inflows from early on. The Economic Development Board (EDB) was established in 1961 by the Ministry of Trade and Industry (MTI) as a one-stop agency to lead Singapore's industrialization drive. EDB worked closely with various ministries and other government bodies to facilitate the entry of export-oriented FDI in strategic industries. Over the 1980s, FDI played a central role in Singapore's development, representing up to 30 per cent of gross domestic investment, more than double the share seen in other regional economies. The country's skilled workforce and efficient business infrastructure, combined with stable and largely corruption-free institutions, drew FDI from over 7,000 TNCs that now account for over two-thirds of Singapore's manufacturing output and direct export sales. Levels of FDI inflows have generally followed an increasing trend (figure III.1), yet the vulnerability of the economy to external shocks has created large spikes, particularly in years around major global crises.

Despite an initial focus on labour-intensive manufacturing, Singapore's focus shifted to encouraging FDI inflows in higher value-added areas and skill-intensive activities. The EDB targeted industries such as chemicals and electronics. More recently, emphasis has been on product development, biomedical research, educational and health care services. International businesses are also encouraged to establish R&D facilities in the country, and to use it as a location for international or regional headquarters.

Singapore does not impose any restrictions on foreign ownership in manufacturing activities but maintains restrictions on strategic sectors for security reasons and on certain service sector activities. However, since the late 1990s, the Government has been relaxing foreign ownership restrictions in key service industries, for instance, lifting the 40 per cent limit on foreign ownership of local banks in 1999. A 70 per cent limit on foreign ownership of the Stock Exchange of Singapore, as well as all ownership restrictions in telecommunication services were removed in 2002. Restrictions remain in specific professional services such as air transport, law and media (newspaper publishing).

Overall, the Singapore Government neither screens FDI inflows nor maintains policies on performance requirements. Singapore largely complies with World Trade Organization (WTO) Trade-Related Investment Measures obligations and has signed investment agreements with its Association of Southeast Asian Nations (ASEAN) members, as well as a number of other countries. Many trade pacts also offer some form of investor protection. In any event, the Singapore Government has not expropriated foreign investments in the past.

Figure III.1 FDI inflows in Singapore (\$ million)



Source: FDI/TNC database

Singapore's FDI climate benefits from strong institutions, plentiful infrastructure, generous investment incentives, and a facilitative environment for R&D activities. The country has a strong reputation for fair and transparent government decisions, ranking fourth in Transparency International's corruption index. Singapore also ranked as the number one country in the World Bank's *Doing Business* report. The Government provides world-class infrastructure for foreign investors, as well as competitive direct and indirect incentives for FDI in key sectors. Incentives normally include concessionary corporate tax rates of between 5 to 15 per cent or corporate income tax exemptions. Non-tax incentives including grants can be offered for particular high-value-added sectors, training and R&D. Among the Government's support for R&D-related businesses, Singapore Science Park provides modern infrastructure in its three different locations. The Agency for Science, Technology and Research (A\*Star) also fosters scientific research through, among other initiatives, large infrastructure projects such as Fusionopolis (for information and media industries) and Biopolis (for the biomedical sciences industry). Singapore offers a good policy environment for knowledge-intensive TNCs, including strong Intellectual Property Rights protection. To resolve disputes in a new frontier such as e-commerce, Singapore Subordinate Courts offer Alternative Dispute Resolution.

### **C. SME sector: policies and programmes**

Over the years, Singapore has employed several definitions of SMEs in examining the growth and development of the SME sector. The definitions also determined the eligibility of firms to government funds and assistance designated to support SME development. In 1960s, EDB defined a small company as one that employed less than 40 workers with fixed capital assets not exceeding S\$2 million in order to be eligible for financial assistance under the Small Industries Finance Scheme. Under the 1988 SME Master Plan, an SME was defined as "a company with at least 30

percent local equity and not more than S\$8 million in net fixed asset investment if it is in manufacturing, or employs not more than 50 workers if it is in commerce or services.” More recently, domestic SMEs were defined as companies with at least 30 percent local equity and fixed productive assets (i.e. net book value of building, machinery and equipment) of not more than S\$15 million and employing not more than 200 workers for the services sector (SME 21 Report). As there is a lack of data for this definition, employment size of less than 200 employees has been often used to survey SMEs.

Table III.1 illustrates the relative SME share of business establishments, employment and value added for the manufacturing and services sectors. The table shows clearly that SMEs have a large presence in the manufacturing sector, employing nearly 41 percent of workers and contributing about one-third of the sector’s value added. An even stronger presence is evident in the services sector where SMEs account for two-thirds of total employment and nearly 60 percent of value added. It should be noted, however, that SMEs tend to experience lower labour productivity (value added per worker) and also tend to pay lower average wages compared to larger firms in both sectors.

Although Singapore’s early industrial strategy mainly focused on attracting TNCs, SME promotion gained increasing emphasis in the 1980s. The 1987 SME Master Plan outlined a goal to develop indigenous global enterprises by strengthening the capabilities of domestic SMEs. The Singapore Competitiveness Report in 1998 further strengthened the country’s focus on developing a strong local SME sector. More recently, the 2000 SME 21 Report set a ten-year strategic plan to create vibrant and resilient SMEs in Singapore. The report set targets to increase the number of SMEs with significant sales, improve productivity, and pursue ecommerce. Several broad-based, sector-level, and enterprise-level strategy initiatives were created to achieve these goals.

Table III.1. Share of SMEs and large enterprises in Singapore (2007)

Industry size (number of workers)	Establishment		Total workers		Value added		Remuneration per worker	Value added per worker
	No.	Share (%)	No.	Share (%)	S\$ '000	Share (%)		
<b>Manufacturing sector</b>								
Less than 200	7799	95.5	165385	40.9	18348682	32.8	S\$'000 35.27	S\$'000 110.94
200-299	140	1.7	34215	8.5	5155693	9.2	40.42	150.69
300-999	180	2.2	94931	23.5	19554199	34.9	43.08	188.98
1000 and over	47	0.6	109526	27.1	12962424	23.1	47.94	118.35
<b>Services sector</b>								
Less than 200	137734	99.5	800902	66.9	79043027	59.4	42.86	98.69
More than 200	641	0.5	396611	33.1	53922505	40.6	61.64	135.95

Source: Report on Census of Manufacturing Activities, 2007, Economic Development Board, Singapore and Department of Statistics, Singapore

A number of public institutions and agencies have been charged with formulating and implementing SME-related programmes over the years. In 1986, the EDB created the Small Enterprise Bureau to coordinate a number of programmes to support SMEs and encourage them to work with TNCs. However, today, most SME initiatives are managed by the EDB, the Standards, Productivity and Innovation Board (SPRING Singapore) and International Enterprise Singapore (IE Singapore), all of which fall under the MTI. Singapore's small size allows a concentration of administrative responsibilities and resources. This in turn facilitates a strategy of coordinated targeting for FDI and SME promotion, including the potential to encourage supplier linkages.

The Government of Singapore also indirectly invests in both domestic and foreign companies through its investment holding company, Temasek, and the Government of Singapore Investment Corporation, which manages government funds. These investments can support Singapore's economic strategies by targeting key sectors and business activities. As in the case of Malaysia, the resulting government linked corporations (GLCs) are managed independently.

#### *General SME financing*

Singapore has initiated a number of financial assistance programmes targeting SME start-ups, as well as SME growth and internationalization. Most of these financing programmes are led by government agencies, such as SPRING Singapore, IE Singapore and the EDB, but administered through a network of participating financial institutions. Financial support includes loans for specific investments as well as for working capital.

Since the early 2000s, there have been several new government initiatives aimed at financing local entrepreneurs and SME in the early start-up phase. To assist promising entrepreneurs

interested in starting a business, Singapore launched the Entrepreneurial Talent Development Fund. The Fund works with higher education institutes to co-invest with students in their business ideas. Other programmes provide equity financing for newly established SMEs with strong growth potential, such as the SPRING Start-up Enterprise Development Scheme (SEEDS). To date, the initiative has invested in various growth sectors, such as science and technology, ICT, and business services. To help micro-enterprises access working capital, the Micro Loan programme is available to companies with less than 10 employees.

Financial programmes to support the growth and internationalization of established SMEs have a long history in Singapore. The Small Industry Finance Scheme, launched in 1976, has been a major source of working capital and financing to upgrade or expand operations. Within a decade, the programme had been extended to the service sector as well. It has since been renamed the Local Enterprise Financing Scheme (LEFS), and recently ceased its working capital services, focusing instead on loans to purchase or upgrade equipment and other assets. The Loan Insurance Scheme (LIS) has helped fill the gap by insuring working capital loans to eligible SMEs.

#### *Upgrading SME capabilities*

Singapore's objective to strengthen the capabilities of domestic SMEs has been pursued through a number of general and specific initiatives. At the industry-level, SPRING and IE Singapore manage the Local Enterprise Association Development (LEAD) programme, which partners with industry associations to fund broad initiatives to improve the capabilities of their SME members. Over a dozen industry associations have participated so far. LEAD is complemented by the Capability Development Programme (CDP), which directly assists SMEs to improve capabilities at the enterprise or strategic grouping level.

To enhance human capital in SMEs, a number of enterprise-level programmes have been made available. For example, the Management Development Programme (MDP), administered by SPRING, trains SME CEOs and senior managers through courses customized to the company's needs. Although not specific to SMEs, they are also encouraged to use the general Skills Development Fund (SDF), where employers may be eligible to have the majority of course fees covered at designated training centres.

### **Box III.1. Enhancing SME innovation capabilities**

The TIP seeks to develop the capabilities of SMEs to innovate and move up the technology ladder. TIP assistance is available to SMEs struggling to innovate due to lack of funding, scientific resources or technological know-how. Eligible SME projects are those that involve the application of science and engineering to develop new products, processes or business models. Using TIP funding, SPRING Singapore has established COIs with the assistance of local universities and polytechnics to help small firms take innovation to the next level. Such COI have been set up in key industry sectors, such as environmental and water technology, food manufacturing, marine, precision engineering and electronics.

Two local SMEs provide examples of how TIP assistance with product development can enhance enterprise competitiveness. TIP funding covered 50-70 percent of the R&D costs for Nutri-water, a beverage with nutraceutical ingredients developed by Field Catering Supplies with expert assistance from one of SPRING's COIs. In another example, a manufacturer of garment production systems, AMS system, used TIP funding and staff at COIs to improve the technological skills of its staff. This helped the firm develop AMS E3000, a cutting-edge production system using radio-frequency identification technology to increase efficiency by 200 percent.

*Source: The Straits Times, August 26, 2009.*

Other capability enhancing programmes focus on building innovative, technology-intensive SMEs. An early programme in this area was the Small Industry Technical Assistance Scheme. Introduced in 1982 to accompany early SME financing efforts, it has since been renamed Local Enterprise Technical Assistance Scheme. The programme partially subsidizes the cost of engaging consultants to upgrade and modernize business operations. Another notable initiative is the Technology Innovation Programme (TIP). Administered by SPRING, it aims to enhance technology infrastructure to support product and process innovations in SMEs. The programme co-funds technology-oriented innovation projects by SMEs and supports a network of Centres of Innovation (COIs) (box III.1).

#### *Promoting SME market expansion*

Due to the relatively small domestic market, overseas expansion is very important to the success of Singapore SMEs. According to a Government survey of SMEs in 2009, 69 per cent had established overseas ventures. In line with Singapore's development strategy of broad global engagement, the Government has made strong efforts to facilitate the expansion of domestic SMEs into international markets, including through overseas investment. These efforts include, among others, financing, tax incentives and grants.

Special financing for international expansion has been made available to SMEs. Key examples include the Growth Financing Programme, where the EDB makes long-term equity investments in promising SMEs, and the Internationalization Finance Scheme, which facilitates loans for SMEs to acquire foreign assets or pay foreign expenses.

In addition to finance, the Government provides broad-based tax incentives to encourage Singaporean companies to enter

foreign markets. For example, companies can deduct double the eligible expenses for approved overseas market development projects. Moreover, they can use current year losses from approved overseas investments to defer taxes from profitable domestic operations for up to two years.

To help SMEs build the necessary capabilities to venture abroad, a special programme focused on internationalization has been created under the CDP (see above). This programme facilitates the development of a broad range of firm-level capabilities (e.g. branding, design, manpower, franchising and licensing, e-commerce) for the purpose of overseas expansion. A recent related initiative is the SME Market Access Programme, which is designed to encourage SMEs to enter new markets. It helps cover third party costs of entering new markets, which often pose entry barriers for smaller companies. Examples of these costs include those related to submission of legal documents, product listing fees, and identifying distributors and partners.

Other government initiatives take a more selective and targeted approach to SME assistance, evaluating the international growth potential of particular firms, as well as their relationship to key sectors targeted in FDI policy goals. This approach focuses attention on SMEs that, with some special assistance, can be successful in their own outreach to international markets. For example, SMEs selected by the EDB as a Promising Local Enterprise (PLE) are evaluated on whether they have the potential to achieve local TNC status, that is, to develop into a regional and global company (box III.2). Initiated in 1995, the programme met its goal of producing 100 PLEs with S\$100 million in sales by 2005.

### **Box III.2. Local SME expansion into the global electronics market**

Today, AEM Holdings Inc. is a publicly-listed company with a global workforce of 1,100 and operations in Malaysia, Philippines and China. It designs and manufactures equipment, precision engineering products, chemicals and organic substrates, as well as engineering materials and services for the microelectronics industry.

AEM was originally established as Ever Technologies (Singapore) in 1992. The company was selected by EDB as a PLE for local TNC status in 1996. It was also awarded Pioneer Status. These designations qualified the firm for special assistance programmes to support further growth and aid its entry into global markets. Currently, AEM is a leading local enterprise which helps support the microelectronics industry in Singapore and the neighbouring region. Its subsidiary, Microcircuit Technology (S) Pte Ltd, is the first and only advanced organic substrates plant in Singapore.

*Source: Singapore Investment News, November 2007.*

## **D. FDI-SME linkages: policies and programmes**

The early presence of significant foreign investment in Singapore generated strong demand for local partners. At the same time, an early focus on developing a healthy SME sector through financial assistance and capability development programmes allowed for TNC-SME linkages to take place more naturally. Of additional importance were government skill programmes to increase the local pool of human capital in engineering, business management and information technology. These efforts ensured that local SMEs had the necessary absorptive capacity to create and benefit from supplier linkages with TNCs. Nonetheless, the Singapore Government has implemented policies that actively target FDI-SME linkages. Many existing linkages can be traced to the Local Industry Upgrading Programme (LIUP), initiated in 1986 by the EDB.

### *The Local Industry Upgrading Programme*

Since its inception, the LIUP has helped support the transfer of technology, marketing, and business process knowledge from TNCs to domestic SMEs. Under the programme, TNCs are encouraged to “adopt” SMEs in their value-chain, and government support is provided to both parties through three progressive stages of SME development (table III.2). An initial stage seeks to improve efficiency in general SME functions. During a second stage, new products and processes are transferred to the SME. The third stage envisions joint research and product development with TNC partners. Essentially, the LIUP offers various forms of organizational and financial assistance to upgrade vendor relationships. This flexibility ensures that the programme meets the specific needs of the TNC and their suppliers.

By the mid-1990s, the LIUP had already recorded many successes. For example, studies by the LIUP found that suppliers in the early years of partnerships with large firms improved productivity by 17 per cent on average, while value added per worker rose by 14 per cent. By 1994, 180 SMEs and 32 buyer firms, including 28 foreign TNCs, had formed partnerships under the Programme (Battat *et al*, 1996: 29). Around 70 per cent of these partnerships were concentrated in the electronics industry, which had been prioritized by the EDB (box III.3). The LIUP continued to expand over the decade, and by 1999, there were 670 local vendors, 30 TNC affiliates, and 11 large local organizations participating (UNCTAD 2001: 177).

**Table III.2. The Local Industry Upgrading Programme**

<b>Objective</b>	<ul style="list-style-type: none"> <li>• To upgrade, strengthen and expand the pool of local suppliers to foreign affiliates, by enhancing their “efficiency, reliability and international competitiveness”</li> <li>• The programme provides support for local suppliers to upgrade through collaborations with TNCs</li> <li>• Local suppliers are also encouraged to expand internationally</li> </ul>
<b>How it works</b>	<ul style="list-style-type: none"> <li>• The LIUP is implemented in 3 phases: <ul style="list-style-type: none"> <li>- <i>Phase 1</i>: improvement of overall operational efficiency, such as production planning and inventory control, plant lay out, financial and management control techniques</li> <li>- <i>Phase 2</i>: introduction and transfer of new products or processes to local enterprises</li> <li>- <i>Phase 3</i>: joint product, process research and development with foreign affiliates’ partners</li> </ul> </li> </ul>
<b>Incentives</b>	<ul style="list-style-type: none"> <li>• The LIUP’s activities include a variety of organizational and financial support measures for upgrading vendor relationships (e.g. contributions to salary of foreign affiliate representatives seconded to local suppliers)</li> </ul>

*Source:* EnterpriseOne, Singapore.

### **Box III.3: Early LIUP participants in the electronics industry**

In the late 1980s, Hewlett Packard's Singapore affiliate assisted its LIUP partner, FJ Industrial, to set up production facilities with the process control equipment and sanitized rooms needed to manufacture technologically advanced membrane switches and circuits. The SME’s manager and engineer received training at a factory in Los Angeles and Hewlett Packard placed a large initial order with FJ Industrial to supply switches and circuits for its calculators and computers.

/...

**Box III.3 (concluded)**

Another early TNC participant was STMicroelectronics, which first established in Singapore in 1969. In the late 1980s, it joined the LIUP in an effort to further improve the skills of its suppliers. This was seen as an important complement to their transition from assembly and testing activities to investments in R&D and wafer fabrication. Through the LIUP, the EDB subsidized over 50 per cent of the costs for supplier staff to be trained in STMicroelectronics' European plants. Initiatives such as these helped nine indigenous companies evolve into significant local and international players.

*Source:* UNCTAD (2001: 177); Lim and Fong (1991: 130-31); Interviews with STMicroelectronics.

Under the LIUP, local suppliers have been encouraged to follow their TNC customers to other affiliate locations, particularly in the South-East Asian region. For instance, AT&T's local partner, San Teh, expanded enough to claim 14 per cent of the global market for rubber conductive key pads. In another example, Close cooperation with its LIUP partner helped Next Technology meet the US Food and Drug Administration's good manufacturing criteria (Brown, 1998). Other SMEs, such as Advanced Systems Automation, and Manufacturing Integrated Technology, have also evolved into first-tier internationalized suppliers (Matthews, 1999).

Although initially based primarily in the electronics industry, the LIUP programme has since expanded to include other areas. For instance, the LIUP became active in the aerospace industry in the early 2000s, with initiatives led by Rockwell Collins and Honeywell (Box III.4). Specific attention has also been paid to the information technology industry, leading to the creation of the Infocomm Local Industry Upgrading Programme, which is based on the LIUP model. Major TNCs participating in this programme have included Cisco System, Apple, Hewlett Packard, Microsoft and Oracle (Coe and Perry, 2004).

**Box III.4. Honeywell Aerospace joins LIUP**

In 2003, Honeywell, the global technology and manufacturing company, announced that its Aerospace Electronics Systems (AES) business unit would be joining the LIUP. AES, with its role in sourcing materials from the local and regional market for operations in the United States, had a clear interest in supporting the development of a pool of competitive and reliable Singaporean suppliers. Beginning with a set of 15 supplier firms, the LIUP would support AES suppliers in meeting the TNC's specifications, quality requirements, and help instill best practices in production.

*Source:* [www.asian-aerocad.com](http://www.asian-aerocad.com).

**E. Conclusion**

Singapore has developed an extensive network of SMEs providing parts, components and other services to TNCs in key industries. These linkages have led to significant technology transfer and productivity improvements for local companies. Although many linkages have arisen spontaneously due to private interaction between TNCs and SMEs, government policy has also played an important role. Since as early as the late 1970s, government financial and technical assistance has been made available to local SMEs, helping them improve their capabilities, which has in turn allowed them to establish supplier relationships with major TNCs. To maximize the benefits arising from these linkages, the Government targets and continues to target these supplier relationships through programmes such as the LIUP.



## **IV. “BEST PRACTICES” LESSONS FOR CREATING BENEFICIAL FDI-SME LINKAGES**

The SME sector constitutes a large and socially crucial segment in most economies. SMEs contribute substantially to GDP and are important sources of job creation and entrepreneurial potential. However, these firms typically confront obstacles that block their growth and development. Small size hinders access to resources needed for expansion, principally adequate financing but also human capital and technology. Most SMEs lack the internal R&D capacity and funding necessary to translate innovative ideas into concrete business projects. Many governments create SME promotion programmes that seek to overcome these obstacles, but they also often lack sufficient funding, technology and market outreach to meet their goals.

One way to supplement available resources and spur SME development is to create linkages between the foreign affiliates of invested TNCs and domestic SMEs. Expanding SMEs as suppliers of a foreign affiliate’s export-oriented production is a typical representation of this relationship. Benefits arising from these relationships may include, among others, exposure to new market opportunities, upgraded management skills, new technology, greater access to capital, and increased internationalization. Countries considering the promotion of linkages to foster SME development should conduct an assessment of the prevailing conditions and focus on three interrelated elements that are essential for beneficial linkages:

- TNC willingness to participate and increase local sourcing of supplies and/or services;
- SME capability to work with TNCs and meet their required standard of quality and reliability;
- A mutual interest/gain in establishing a lasting business relationship.

Governments have the ability to influence all three elements through policies and programmes. The case studies of Malaysia and Singapore presented in this report, in addition to previous UNCTAD experience, point to a number of best practices, as well as mistakes to avoid.

## **A. Ensure a favourable business climate for SMEs and TNCs**

The potential for building linkages should be considered in the context of a host country's investment climate. Ensuring a favourable business climate is critical to attracting foreign investors in the first place, but also for assisting local SMEs to overcome some of the constraints they face.

### **1. Attracting FDI is a precondition for creating linkages**

*Foreign investors need to see a relatively open stance towards FDI. The openness, integration and clarity of national laws and policies frame a country's investment climate and influence FDI decisions. Efficient, effective and transparent business facilitation also helps attract FDI.*

Both Malaysia and Singapore have always put a relatively strong emphasis on FDI attraction. In Malaysia, policy reforms, including the introduction of the Investment Incentives Act in 1968, the establishment of free trade zones in the early 1970s, and the provision of export incentives alongside the acceleration of open policy in the 1980s, laid the foundations for a surge of foreign investment. FDI in sectors targeted for growth by domestic industrial policies also received favourable treatment, including significant financial support and other incentives. Apart from these factors, sound macroeconomic management, sustained economic growth and the presence of a well functioning financial system have made the country an attractive destination in which to do business.

The country was ranked by UNCTAD's World Investment Prospects Survey 2007-2009 among the top 20 most attractive countries for FDI. The recent financial crisis and subsequent recession has led to additional measures to improve the investment climate.

Singapore's small internal market and lack of physical resources underpinned an early commitment to open trade and investment policies. Attracting FDI was treated as an essential element of the industrial policy designed around an export-oriented growth strategy. Complementary national policies promoted improvements in human capital and business infrastructure, financial incentives encouraged FDI in competitive sectors, few strategic sectors restricted FDI, and regulations were applied equally to foreign and national firms. Clear national laws have been reinforced by proactive bilateral, regional and international efforts to sign agreements ensuring a stable legal framework for international business. Singapore has also ranked extremely high in terms of ease of doing business and low corruption.

## **2. Cater to the specific needs and concerns of SMEs**

*SMEs are fragile with respect to some key regulatory constraints because they do not have the same ability as large corporations to confront administrative burden.*

Complicated and inefficient tax codes, high start-up costs, bureaucratic complications and distortions, inflexible labour codes and other indirect labour costs bear most heavily on SMEs, raising their cost of doing business and depriving them of the flexibility to adapt. Improvements in the business climate make it easier for informal businesses to enter the formal sectors, for new companies to be established and for micro-enterprises to develop into SMEs.

In Malaysia, problems related to doing business are especially burdensome for local SMEs. Foreign investors may have the ability to overcome bureaucratic constraints through high-level project facilitation. Some facilitative measures, such as SME advisory services, may help in the short run, but broader reforms are necessary. Singapore, on the other hand, has made considerable progress to simplify administrative burden on companies. To encourage private sector initiatives, administrative burdens have been reduced to a minimum, thereby providing significant benefits to local SMEs and their development.

## **B. Strengthen the SME sector**

A strong and well-developed SME sector is essential for linkages to occur. SMEs need to be at a level of development where it is realistic for them to engage in business relationships with larger TNCs. The latter will not willingly participate in linkages programmes if that means working with SMEs that do not operate under modern standards of operations, management and quality control that are essential to them. Yet, domestic SMEs in developing countries face important constraints. It is therefore essential that comprehensive support be provided through SME promotion and development programmes to strengthen the absorptive capacity of local firms and ensure that they are "partnership-ready" to capture linkage opportunities.

Required support to bring domestic enterprises up to TNC and international standards usually includes technology upgrading to improve product quality and production processes, development of human capital and managerial skills to compete in international markets, and access to financing to enable SMEs to invest in capital equipment and human resources. Appropriate design and development of these supportive mechanisms should be based on a comprehensive business diagnosis and auditing of domestic firms to

understand precisely their deficiencies and needs, so that critical areas for improvement can be identified and addressed.

### **1. Give sufficient policy priority to general SME goals**

*SMEs are a major part of the economy and need to receive early and adequate attention in economic development strategies.*

In most countries, SMEs constitute over 90 per cent of domestic business establishments and represent substantial shares of employment and GDP. Nevertheless, most industrial policies focus on larger enterprises that can reach the economies of scale and scope needed to compete with foreign firms in open domestic and international markets.

With the exception of some basic credit facilitation, Malaysia provided very limited services to SMEs in its early stages of development. When support for the sector was forthcoming, it was often selective, leaving local Chinese-owned SMEs to grow largely outside of these programmes. The relative lack of broad-based SME programmes limited the development of the sector. Since the mid-1990s, however, there has been a proliferation of programmes addressing multiple constraints across the SME sector. In Singapore, SME-focused programmes came about earlier and encompassed both financing and capability enhancements. Moreover, Singapore's early promotion of human capital and business infrastructure was a benefit to both domestic and foreign firms.

*Successful SME promotion programmes require an accompanying policy priority that can gain the attention and resources needed to attain this goal.*

Initially, Malaysia treated SME development as a desirable, but low priority, goal. It was not until the late 1990s and early

2000s, with the creation of SMIDEC in 1996 and the NSDC in 2004, that efforts were made to prioritize the sector at high levels of government. Consequently, in the 2006 Third Industrial Master Plan, the SME sector was labelled as a key growth priority.

Early policy direction in Singapore also overlooked the potential of the sector, yet not to the same extent as Malaysia. In 1987, the SME sector gained explicit recognition as a policy priority in the SME Master Plan, which envisioned developing indigenous SMEs into global enterprises. The 1998 Competitiveness Report laid out a clearer policy goal, describing three types of SMEs with growth potential. These policy goals were refined and reinforced by the SME 21 Report in 2000.

*Build local SME capabilities to enhance the potential for linkages.*

While SMEs can benefit from linkages with TNCs, this requires a certain set of pre-existing capabilities in order to attract TNC partners and to absorb knowledge and technology spillovers through this relationship. Malaysia's experience highlights this point. Under the Vendor Development Programme, Malaysian SMEs were set up as suppliers to TNCs with little attempt to ensure their preparedness. Moreover, restrictions related to ethnicity limited the entry of many qualified firms. Partly as a result, the programme's automotive project in particular has been relatively unsuccessful, with limited local enterprise development. The more successful linkage initiatives in Malaysia were those involving joint-capacity building (e.g., the Industrial Linkage Programme and the Global Supplier Programme), where TNCs were assured of adequate suppliers and given the chance to pool resources with the government to improve SME capabilities. Thus, to create and benefit from linkages, general SME capabilities must meet a certain threshold.

Both countries currently employ programmes that seek to build SME capabilities by encouraging entrepreneurship, human capital development and the upgrading of technology and innovation capabilities. Malaysia's efforts in this area were quite limited until the late 1990s and early 2000s. For example, the Vendor Development Programme was created in the late 1980s, but relied almost exclusively on TNCs to build SME capabilities. More recently, a clear policy shift towards the objective of building internationally competitive SMEs has driven a proliferation of SME-related initiatives on multiple fronts. Most ministries and relevant agencies have developed or enhanced programmes to build SME capabilities and support SME growth. In Singapore, policies regarding SME capabilities have been more consistent and were included as early as 1982, with the introduction of the Small Industry Technical Assistance Scheme to provide consulting services for SME upgrading.

Both countries have also invested heavily in R&D-related infrastructure projects that have helped increase the capacity of local enterprises. For instance, Malaysia created Cyberjaya as a “hub” location for computer technology firms, linking it with the Multimedia Superhighway Corridor (MSC) project. The project offered exceptional financial incentives to develop the ICT sector. Nearly three-fourths of SMEs in the sector have qualified for MSC status, although some limits are imposed on benefits. In Singapore, the Government commissioned three science parks along with the large infrastructure projects at Fusionopolis and Biopolis.

## **2. Policy and programme structure for SME promotion**

*Policies and programmes can be both horizontal and targeted.*

Proactive government interventions to favour specific SMEs, industries, or sectors need to be carefully designed. This type

of targeting will result in disproportionate amounts of funding and assistance provided to a limited number of firms. While the grooming of a few SMEs deemed to have the potential to become home-grown TNCs might be a fine option, there are examples of such efforts essentially precluding the growth of other viable local firms. In general, a strategy of selecting winners requires flexibility and should be coupled with elements of a more horizontal approach.

Both Malaysia and Singapore mixed horizontal and targeted SME promotion. Currently in Malaysia, general SME efforts across all sectors are complemented by sector or industry-specific services. For example, standard financing support is made available to a wide range of SMEs. At the same time, specialized government-linked corporations (GLCs) offer skill and technology upgrading programmes to SMEs in the ICT, halal and biotechnology industries, which have been identified as priority areas. Similarly, in Singapore, SME 21 has been following a three-tiered approach, including broad-based support to promote Singapore as an SME hub, as well as targeted sector- and enterprise-level SME goals.

*Targeting requires transparent, merit-based SME selection.*

Beginning with Malaysia's New Economic Policy (NEP) in the 1970s, SME sector initiatives have often given preference to Bumiputera SMEs. These preferences resulted in two negative effects: inhibiting the growth of some local Chinese SMEs, while discouraging certain FDI that might have provided significant linkage opportunities. For example, in the case of the Vendor Development Programme, quality and cost difficulties of new Bumiputera SMEs undermined the programme's objectives. The selection of SMEs based on non-economic criteria failed in many cases to bring along associated economic benefits and limited the growth of the SME sector.

Although some preferential programmes persist, recent initiatives in Malaysia have employed more merit-based SME selection. For example, the SME Corp, when administering programmes such as the Global Supplier Programme (GSP), picks successful SMEs for promotion based on the criteria of TNCs, with only the most suitable being selected for assistance with specialized training programmes. To help with assessment, a comprehensive rating system called SCORE was recently created, assigning SMEs anywhere from one to five "stars". The foreign-owned retailer Tesco, for instance, agreed with SME Corp to set a minimum rating of three stars for food processing SMEs to be eligible in its GSP-sponsored supplier development programme.

Similarly in Singapore, the Promising Local Enterprise (PLE) programme reflects a targeted approach with merit-based selection. The EDB selects specific SMEs assessed capable, with special assistance, of developing into regional or global companies. SMEs are selected based on assessment criteria that evaluate the strength of core competencies, growth-oriented management and the capacity and critical mass to grow. The EDB works with SMEs that achieve "local TNC status" to develop new capabilities, identify and facilitate strategic alliances, and provide growth capital in addition to other capability-related benefits.

*Option: focus on larger SMEs that are usually smaller in number but have more significant economic impacts.*

One way to balance between horizontal and targeted approaches might be to prioritize programmes for medium-sized enterprises. These firms have larger economic impacts and their collective numbers are smaller than the universe of micro-enterprises that comprise almost 80 per cent of Malaysia's SMEs. This option leaves out most broad-based programmes and misses entrepreneurial start-ups that may provide new competitive advantages. However, the subset of SME promotion programmes

designed primarily to create FDI-SME linkages is generally focused on medium-sized SMEs. These SMEs are more likely than their smaller counterparts to possess capabilities needed for linkages that result in “win-win” scenarios.

*Consider decentralization, but ensure that programmes are effectively coordinated and prioritized.*

Both targeting and implementation of SME-related programmes may be easier to manage in sub-national units that are closer to both local SMEs and foreign affiliates. Decentralization of SME programmes at the local level can be linked to more results within the sector and may produce more direct SME development impacts. However, coordination of these policies and programmes is important.

The successful experience of the Penang Development Corporation (PDC) demonstrates the advantages of having local economic development institutions focused on the provision of research infrastructure, skill development centres and specialized incentives for both TNCs and SMEs. The recent creation of five economic growth corridors has adopted a similar approach, seeking to develop regional strengths without being confined by sub-national political boundaries. The country’s privately managed sector-specific GLCs were also able to manage programmes for SMEs and adjust them to specific market environments.

In addition to providing more flexibility, decentralization offers a laboratory to develop best practice policies and programmes that can later be expanded at the federal level. For example, the Global Supplier Programme, administered country-wide by SME Corp, is based on the success of a programme originating at the Penang Skill Development Centre.

Large-scale decentralization, however, has led to problems of coordination in Malaysia. After the country placed a higher priority on SME promotion in 2003, SME programmes spread across 14 ministries and 60 agencies, diffusing both resources and priority targets. Since 1996, the role of SME Corp and its predecessor, SMIDEC, has been to address this problem by providing programme coordination across the complex web of horizontal and targeted SME initiatives. The organization, for instance, incorporated regional training centres into its broad-based skill development programmes for SMEs. Another notable move towards more effective programme governance was the creation of the National SME Development Council (NSDC) in 2004, tasked with providing high-level leadership and coordination with other aspects of the country's strategic development plans.

*Simplify procedures for SMEs and/or help them navigate administrative hurdles.*

In Malaysia, SMEs have expressed concern regarding what they see as overlapping programmes, often with separate administrative procedures. The proliferation of regional, federal and sector-based institutions and agencies has expanded the bureaucratic complexity facing SMEs, many of which have limited capacity to navigate the system. Malaysia has tried to address these concerns by ensuring efficient administration (e.g. many GLCs have explicit guarantees regarding the processing of applications) and by creating SMEinfo, a "one stop" information portal with details on programmes and associated administrative requirements. However, SMEs would still benefit from more consolidated services in this area.

### 3. Formulate an appropriate definition of SMEs

*Be cautious with SME definitions, as these determine programme eligibility.*

Countries require a definition of SMEs to analyze and understand their own SME sector, and to determine which firms are eligible for government programmes. There are a number of variables that can be used to define and classify SMEs, and these may need to be adjusted depending on sector or type of business establishment. The level of foreign ownership is another important consideration.

Malaysia adopted a standard SME definition using number of full-time employees and annual sales with differentiated levels for micro, small and medium-sized enterprises. The definition also adjusted the numeric criteria between two categories of business activity, recognizing that manufacturing, agribusiness and related services are typically larger in scale than primary agriculture, ICT and other services. The 30 per cent Bumiputera equity criteria for SME programme eligibility under Malaysia's New Economic Policy requirements applied to both domestic and foreign enterprises.

Singapore has employed several SME definitions under different government plans, but generally focused on number of employees and fixed assets, increasing the quantitative limits for both measures in later programmes. A qualifying standard of at least 30 per cent local equity was added to Singapore's SME definition.

*Avoid static criteria that can miss entrepreneurship and risk ending successful ventures prematurely.*

One challenge in promoting SMEs arises in defining and designing programmes that can encourage the creation of SMEs as

well as their growth. The SME sector is populated by innovative entrepreneurs with creative talents, many ready with new business proposals but blocked from their execution by financial or other operational constraints. SME programmes with a minimum size threshold based on employees, sales, or assets, are often inaccessible. To avoid this problem, both Malaysia and Singapore have focused certain programmes on entrepreneurship and start-up SMEs. For instance, the Entrepreneurial Talent Development Fund in Singapore has helped finance start-up costs for new business ideas developed by students at institutes of higher education.

Another definitional challenge for SME creation arises in determining when to terminate programme support for successful SMEs, especially for enterprises venturing into international markets. Assistance programmes with strict eligibility based on specified employee numbers, fixed assets, or sales risk "graduating" successful SMEs, resulting in a withdrawal of support. This could happen despite a need for continued support to establish a market presence in foreign competition or as the SME is preparing to add a higher value-added component to its business. Some provision for flexibility in case evaluation and/or follow-up programme availability may be desirable to recognize the diversity of SME operations and the challenges they face at particular stages of growth.

#### **4. Measure programme outcomes**

*Seek standards to evaluate SME programme outcomes.*

Clear, quantifiable, and comparable measures of success would permit transparent evaluations of relative returns produced from resources spent across various SME promotion programmes. Unfortunately, few such measures are systemically available in Malaysia and Singapore, due to differences in programme objectives, the timing of outcomes and other intervening variables.

Some outcomes can be measured from a zero base for new SMEs, but assessing the contribution of promotion programmes to incremental increases in existing operations is more difficult, presenting a counterfactual situation that assumes what would have happened without the programme's assistance. The intervening role of TNC's operating through FDI-SME linkages further complicated an evaluation of government efforts. Although one set of common criteria would not apply uniformly across programmes focused on different sectors and stages of SME development, particular benefit measures can be selected that best match each programme's objectives, providing at least programme-specific outcome measures.

Rather than looking at the relative performance of different programmes, another option is to set goals regarding aggregate SME performance and to monitor progress. For instance, Singapore's SME21 Report established baseline measures of success for the principal goals of its 10-year strategic plan. The Report called for tripling the number of SMEs with over S\$10 million in sales, doubling annual labour productivity in the retail sector, and quadrupling the number of SMEs with e-commerce transactions; all by 2010. Again, however, the relative impact of policy factors on SME outcomes is very difficult to determine.

*Anecdotes convey real but partial results.*

The most common success measure offered by government programmes in both Malaysia and Singapore consists of anecdotal stories about SMEs that received promotional assistance and expanded their operations, often reaching into export or even overseas markets. Cause-and-effect impacts remain suggestive in cases of broad-based programmes, but can be more persuasive for narrowly targeted assistance. Although counterfactual limitations

still exist, success stories are most convincing where they involve direct FDI-SME linkages.

Anecdotal stories do not provide a broad or cumulative evaluation, but summaries with specific details that link assistance given to outcomes produced can at least reflect a concrete application of programme goals. If agencies are required to reveal unsuccessful as well as successful cases, comparative analyses could provide useful insights regarding conditions and characteristics associated with beneficial programme performance.

### **C. Attract linkage-prone foreign investors**

Government policies can target the attraction of FDI in areas with growth potential that match well with local endowments and development strategies. It can thus provide more potential for sustainable linkages to take place. At the same time, certain types of foreign investments are more prone to use local suppliers in a given economy. Such type of investors should be subject to specific attention by the investment promotion authorities.

#### **1. Attract FDI to strategic sectors**

*Target FDI in sectors and industries with significant growth potential.*

In Malaysia, the Government played a direct role in selecting sectors for FDI attraction in accordance with its national industrial strategy. In each of its phases of industrialization, Malaysia defined high-priority industrial sectors and set long-term strategies for their development in their respective Industrial Master Plans. In the 1970s, for example, the Government targeted export-oriented FDI in the electronics and electrical industry. The Penang Development Corporation was very effective at creating

infrastructure and incentives tailored to particular TNCs. Within a decade, Malaysia became the world's largest exporter of electronic semi-conductors. The competitiveness of this sector in Malaysia helped ensure significant linkage opportunities for local firms.

After years of prioritizing industrialization in more heavy and technology-intensive industries, the Government has sought to promote value-added activities in agriculture and agro-business. Accordingly, FDI policy has, for instance, targeted retail TNCs such as Tesco to provide a market for local food processing companies.

Singapore has also relied on FDI targeting to move from attracting FDI in labour-intensive manufacturing to FDI in capital-intensive manufacturing, and, more recently, FDI in knowledge-intensive activities. The fiscal regime provided incentives for investors that would bring new industries to Singapore and create strong links with the local economy. For example, Honeywell's Singaporean aerospace subsidiary was granted support from the EDB, which envisaged its potential to help upgrade local suppliers.

*Excessive sectoral focus is risky as it is difficult for governments to identify winners and there is a danger of bypassing new opportunities.*

Although attracting FDI in key economic sectors may be effective, there are also risks associated with excessive sectoral focus. Significant resources may be invested in sectors where comparative advantages are absent and fail to develop. At the same time, there is a risk of not supporting nascent opportunities that may have significant development potential. While Malaysia successfully attracted FDI in the electronics and electrical sector, its experience targeting FDI in the automotive sector shows the risks of focusing on industries that may not be appropriate due to factor endowments, the quality of the supplier base, or other aspects of the local context.

## **2. Assess FDI characteristics to determine SME linkage potential**

*Different types of FDI have different propensities to form linkages.*

Various characteristics of FDI may determine the potential for foreign affiliates to develop beneficial linkages with domestic SMEs. Key factors include sector or industry, the local affiliate's years of experience in the host country, the affiliate's role in the TNC's global network, and the home country of the TNC.

### *Sector characteristics*

A sector's relative competitiveness, technological change and structure of business activities will shape the length and depth of its engagement with the host country and, therefore, the nature of potential SME linkages. For example, buyer-driven sectors of the garment industry suffer price competition pressures and periodic location shifts that generally restrain the creation of deep or long-term linkages between a foreign affiliate and specific local SMEs. Malaysia's experience with the electronics sector, in contrast, showed that a higher level of technical quality requirements created a more substantial TNC interest in establishing and maintaining supplier linkages over time. Sectors marked by changing technology also offer the potential for outsourcing and product spin-offs, as TNCs concentrate resources on higher value-added elements. In general, linkage opportunities appear greater where business activities can be separated into discrete segments, such as in food processing, IT services or retail supply.

*FDI longevity and role of foreign affiliate in TNC network*

Research on the ASEAN region suggests that a foreign affiliate gains greater autonomy over time, relying less on the parent's supply-chain network. This autonomy can lead to identifying and creating beneficial relationships with local suppliers in the host country. One indicator of how FDI longevity may impact such linkages is that a foreign affiliate's age is negatively associated with its import propensity (Giroud and Mirza, 2006). Intel's long experience in Malaysia traced a record of progressive outsourcing to local SMEs, often assisted by Intel to establish their supply capacity. Similarly, the long-term presence of Honeywell's aerospace activities in Singapore helps explain its willingness to join the Local Industry Upgrading Programme (LIUP) in order to help develop local suppliers.

A foreign affiliate's potential for high value-added linkages with local SMEs also depends on the affiliate's role in its TNC's global network. Both Malaysia and Singapore have traditionally placed high priority on efforts to establish themselves as a "hub" for regional TNC networks, particularly in high technology sectors and knowledge-based industries. Whereas Malaysia originally used foreign trade zones and more flexible licensed manufacturing warehouses to encourage FDI in manufacturing clusters, the country's new emphasis is reflected in its development of technology-heavy Cyberjaya and the promotion of the Multimedia Super Corridor. By attracting FDI involved in a TNC's R&D operations, the host country gained higher value-added business with a longer time-horizon.

#### *TNC home country*

Some experiences point to general differences in how foreign affiliates from various home countries handle issues relating to local management and technology transfer. Whereas Malaysians often hold senior managerial positions in affiliates of TNCs from

North America and Europe, senior managers in Japanese affiliates typically come from Japan. This difference affects the extent to which TNC knowledge regarding business strategy and operations are diffused locally. For instance, many former employees of American-owned Intel have used their acquired skills and expertise to found new SMEs, often with Intel as their first customer.

Similar differences are apparent in terms of technology transfer, with East Asian TNCs being slower and more reluctant to share technological know-how with their suppliers. Of course, some differences are interrelated with the longevity of an investment and the nature and level of technology involved in particular projects. However, the priority placed by many host countries on attracting and benefiting from higher technology FDI underlines the potential significance of these characteristics.

#### **D. Foster and develop linkages**

With the necessary conditions in place, namely the presence of significant FDI and a supportive framework for local SMEs, supplier linkages are likely to emerge. TNCs have an incentive to use and develop local suppliers to lower costs. SMEs will seek partnerships with TNCs to increase their customer base and acquire new knowledge and technology. Yet, despite these tendencies, a purely market-based approach may fail to result in an optimal level of linkages. Reasons for this may include, among others, poor information on linkage opportunities, limited TNC confidence in local suppliers, or a lack of compensation for TNC knowledge or technology transfers. Government policies and programmes can help overcome these constraints, ultimately facilitating the creation and deepening of linkages between foreign affiliates and local SMEs.

However, government efforts must ensure that participation in supplier linkage relationships remains voluntary on both sides.

Coercive measures are likely to fail. Allowing TNCs to retain control over the selection of their domestic partners is a better approach, and usually results in strengthened confidence in the partnerships. In short, linkages must be "win-win" to take place.

## **1. Use facilitative programmes to match TNCs with local SMEs**

*Provide information and incentives to encourage TNCs to use local suppliers.*

By providing information and contacts on local SMEs, or offering assistance to test local supplier capabilities, government programmes can encourage supplier linkages with TNCs, even during the pre-investment phase. Regional and country-level investment promotion authorities in both Malaysia and Singapore often provide matching services as they facilitate foreign investments. Often, these organizations rely on extensive databases and directories that include detailed information on SMEs. These can be made publicly available as well to assist the private research efforts of TNCs looking for local suppliers. Moreover, programmes such as SCORE in Malaysia, and the PLE programme in Singapore, can provide rigorous and credible assessment of SME capabilities, helping to earn the confidence of potential TNC customers.

Building local linkages often involves a "cost" to foreign affiliates in terms of time and resources, especially if local SMEs have weak capabilities. In these cases, some level of government support during the developmental process may be justified to overcome information or capability "gaps", and to reduce costs and risks for TNCs to pursue local linkage strategies. Although restrictions may be used, such as performance requirements linked to local content, international agreements increasingly constrain such restrictions as their imposition can discourage FDI. Facilitation

measures and/or financial incentives provide alternative inducements. However, there are limits to what can be accomplished. The provision of incentives to foreign affiliates may be of little use if local procurement markets are seriously underdeveloped (Rodríguez-Clare, 1996; Belderbos *et al.*, 2001). This underscores the need for governments to focus on building SME capabilities as a pre-requisite to successful linkage programmes.

*Accommodate open access or inside “seeding”.*

Alternatively, the TNC may follow a process sometimes known as “seeding” by assisting local managers interested in developing a new SME. Choosing to work with “known” partners who are familiar with the TNC’s products and standards provides reassurance regarding the reliability and quality of a new supplier. This approach can stimulate more substantial, direct assistance from the TNC than would otherwise occur. As illustrated in Intel’s multiple spin-offs in Malaysia, the TNC may even second technical personnel to the new firm and provide training for new employees. Government programmes can work in cooperation with TNCs to facilitate and support this phenomenon.

## **2. Seek FDI-SME linkages that move beyond "dependent" to "developmental"**

*Linkages can be characterized as “dependent” or “developmental”.<sup>1</sup>*

Dependent linkage relationships between SMEs and foreign affiliates are characterized by short-term supplier contracts and limited, if any, involvement of the TNC in upgrading SME capabilities. Developmental linkages, on the other hand, enable and assist local SMEs to grow and prosper through long-term supplier relationships. These provide more stability for SMEs, and by

strengthening internal capabilities, allow them to respond better to changes in demand and new product specifications or inputs.

Foreign investors are also better off encouraging developmental linkages, which ensure a reliable local sourcing capacity over the longer term. In addition, developmental linkages that assist local SMEs and communities to grow within the framework of the host country's development policy represent good corporate social responsibility.

*Ensure that linkage programmes address SME capabilities*

Linkages that teach SMEs about supplier operations and processes constitute a useful, but limited, first step toward increasing local SME capacities. To push these linkages in a more developmental direction, TNCs need to make sustained efforts to assist SMEs to become reliable and high-quality suppliers. While some TNCs may have an interest in doing so, this can not always be expected. Government support may be necessary.

In Malaysia, the ILP and the GSP not only match TNCs with local enterprises, but also provide support to upgrade supplier capabilities for their engagement in advanced production processes and global supply chains. Singapore's LIUP is similar in this regard. These programmes offer a variety of support measures, including tax incentives for TNCs and SMEs, special financing, and subsidies for training and product development, among others. The TNC usually works with the SME to formulate the specific details of this assistance in order to ensure that it caters to their specific needs.

*Value the many forms of knowledge transfer from foreign affiliates to SMEs*

Technological upgrading of local supplier firms is a priority for host countries and several governments have adopted measures to encourage technology transfer from TNCs to SMEs and to strengthen technological cooperation between the two. Technology transfer can occur through many types of FDI-SME linkages, depending both on the TNC's willingness to share knowledge and techniques and the SME's capacity to absorb and utilize it. High-value technology is unlikely to be transferred outside the TNC's control, but linkages can facilitate other beneficial knowledge transfers such as assistance with inventory management, marketing techniques and new practices in finance or purchasing. Process technology transfer can take place through the provision of machinery and equipment as well as technical support for production planning, quality management, and inspection and testing procedures. Transfers also often occur through sharing product design and specifications, technical consultations, and feedback on SME performance.

In Singapore, SMEs have benefited mainly from indirect technology transfer such as learning through quality testing and diagnostic feedback, know-how disclosure in product design, and exposure to good manufacturing practices (Wong, 1992). However, government programmes such as the LIUP have helped SMEs move up the value chain from original equipment manufacturers to original design manufacturers. This, in turn, has encouraged linked TNCs to consider further nurturing their technological capabilities (Chew and Yeung, 2001).

#### *Expand markets through TNC networks*

TNC networks accessible through FDI-SME linkages can also open new markets for domestic firms. For instance, Tesco stocked its local and overseas shelves with products from Malaysia's SME suppliers and introduced some firms to direct customer connections overseas. Government initiatives, such as the

Global Supplier Programme provide training and mentoring services that help SMEs build the capabilities to seize opportunities within a TNC's global supply network.

Certification by TNCs can be particularly advantageous for SMEs that require endorsement of their product to facilitate expansion in domestic as well as international markets. Beyond cost competitiveness, foreign customers must be convinced of a new supplier's product quality. FDI-SME linkages can reassure potential foreign customers, as reflected in the accreditation effect of Globetronics' strong supplier links with Intel.

### **Note**

<sup>1</sup> Driffield and Mohd Noor (1999).

## V. CONCLUSION

Promoting beneficial linkages between foreign affiliates and domestic SMEs represents a politically attractive goal for both host governments and invested TNCs. However, the measureable economic return from such programmes is often uncertain, at least when compared to the clear challenge of assisting so many firms of diverse quality and commitment. Studying the experiences of countries with positive FDI and SME outcomes, such as Malaysia and Singapore, can help identify key factors affecting programme success.

The two countries examined in this case study both followed proactive encouragement policies to promote SMEs and to create beneficial TNC-SME linkages. Malaysia pursued several development strategies that attracted different types of FDI. Early SME programmes primarily served socio-economic goals which sometimes restricted FDI operations as well as SME sector growth. Malaysia's recent policy shift to prioritize SME development has sparked a proliferation of government programmes, including some successful programmes specifically designed to support FDI-SME linkages. In Singapore, early reliance on FDI was accompanied by programmes to assist certain SMEs that could develop competitive international capabilities. The large FDI presence in Singapore provided opportunities to forge beneficial linkages with SMEs, initially through supplier relationships that later expanded SME capacity and sometimes provided international outreach.

The case experiences of these two countries can provide insights, but not a recipe for other countries that seek to promote SME development. A realistic self-assessment of each country's economic conditions and FDI climate should inform the chosen goals and approach to SME promotion. The potential for beneficial FDI-SME linkages will depend on many factors, including the foreign affiliate's sector, operational activities, and role in the TNC's global network. For their part, host countries can invest in

basic infrastructure and human capital to improve conditions for both local entrepreneurs and foreign investors. More targeted assistance can help at several stages to overcome start-up obstacles for SMEs, spur increased technical capacity, and support international market outreach. FDI-SME linkages, facilitated by government programmes, can contribute to each of these stages by offering initial training and mentoring, expanding and upgrading SME supplier capabilities, and providing foreign market endorsements and channels for overseas sales.

The capacity of host governments to provide effectively designed and efficiently executed SME promotion programmes will largely determine their success. Financial and other support for SMEs, along with targeted incentives for FDI, are sometimes needed to overcome initial barriers to creating FDI-SME linkages. However, cost-saving coordination of government programmes and low-cost business facilitation measures can be equally important factors in supporting SME growth. By establishing an environment conducive to creating beneficial FDI-SME linkages, a host government can encourage entrepreneurial innovation, provide opportunities for commercial realization and exploit untapped reserves in its SME sector for growth and development.

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