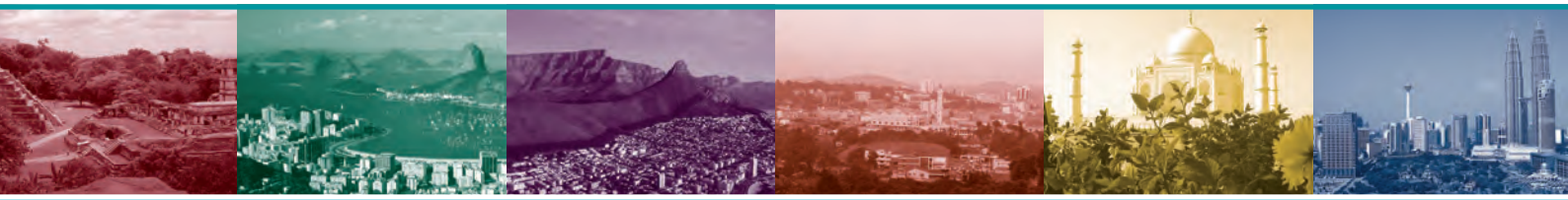
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

CREATING BUSINESS LINKAGES:

A Policy Perspective



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CONTENTS

PREFACE

A second phase of globalization characterized by economic multipolarity is taking place. One of the features of this new phase is the increasingly important role played by developing countries in the global economy in general and in international trade in particular. Closer integration, openness to trade and foreign direct investment (FDI) flows are helping firms in developing countries become part of international production networks and global value chains, thereby creating new sources of growth and development worldwide. However, evidence shows that FDI expansion and trade liberalization need to be accompanied by a coherent policy framework both at the national and global level, enabling enterprise development and the integration of domestic markets into global markets.

A key factor determining the benefits host countries can derive from FDI are the linkages that transnational corporations (TNCs) establish with domestically owned firms. As argued in the 2001 edition of UNCTAD's World Investment Report, entitled *"Promoting Linkages"*, these represent one of the best ways for small and medium-sized enterprises (SMEs) to enhance their competitiveness and acquire critical missing assets such as access to international markets, finance, technology, management skills and specialized knowledge. Linkages promotion programmes can only succeed in the presence of a conducive policy environment, as well as policies aimed at addressing any information or capability gaps which may hamper the integration of domestic and foreign firms in the global economy.

Governments in cooperation with development agencies and the private sector play a crucial role in implementing proactive policies aimed at integrating FDI into a broader development context. On one hand, governments should intervene with specific policies related to the FDI area, and strive towards improving the investment climate and attracting strategic FDI. On the other hand, they should also implement more specific measures for SMEs, which are focused on strengthening the local absorptive capacity and developing a competitive local supplier base. According to the different specific-country features, each programme should seek to create a critical mass of purchasing companies which would result in real opportunities for domestic supply and a pool of qualified domestic enterprises capable of supplying the goods and services demanded by TNCs. In addition, effective selection mechanisms should be put in place to identify and link TNCs and domestic enterprises, as well as assist domestic enterprises to overcome supply-side constraints and comply with TNCs' quality standards.

This publication includes a comprehensive overview, a series of international case studies on good practices in the promotion of business linkages, and concrete guidelines on how to design and implement a business linkages programme. The country studies that form part of UNCTAD's international survey include the case of Brazil, India, Malaysia, Mexico, South Africa and Uganda. The studies were conducted in 2005 and 2006, and updated by UNCTAD in 2008, within the framework of the GTZ-UNCTAD Project "Promoting Inter-firm Cooperation in the North-East of Brazil", aimed at promoting the efficiency of the domestic enterprise sector through the creation and deepening of fair and sustainable business linkages between foreign affiliates and Brazilian SMEs.

The analysis of the case studies is aimed at identifying the underlying determinants of linkages formation and to better understand under what circumstances the establishment of TNC-SME linkages becomes a key driver of economic growth and an effective channel for the transfer of foreign technology and knowledge. In Malaysia, for example, the government played an active role and had a long-term vision with regard to attracting and retaining TNCs, especially those more likely to form business linkages with local SMEs, providing attractive financial incentives as well as investing in human capital and infrastructural endowment. The Indian and the South African cases reflect successful location and cluster-specific promotion activities. Such activities seek to develop a collective vision on common entrepreneurial goals and intensify interactions among firms in a cluster of industries or in a spatially-dispersed network of enterprises. Governments and development agencies provided public goods, such as common infrastructure and facilities, incentives in the form of fiscal, credit and marketing packages, along with intangible assets, such as dissemination

of information and facilitation of inter-firm cooperation. In particular, cluster-specific promotion initiatives proved to be crucial in ensuring the integration of TNCs and local firms, as well as in facilitating the sharing of new technology and knowledge, the access to sources of information and networking, and contributing to the creation of scale and agglomeration economies.

Coordination of policies between the State and regional authorities is also particularly important to promote economic development. An example of this is the case of Mexico where the relative autonomy of regional authorities made it possible to be more flexible and responsive and therefore, better equipped to cope with the challenges of rapid trade liberalization and increased global competition. The thriving Jalisco/Guadalajara electronic cluster is an example of this. The development of linkages in agribusiness in Uganda has proved to be instrumental in poverty alleviation, and UNCTAD's Business Linkages programme in Uganda has made concrete contributions to enhancing the country's business environment by, amongst others, providing policy advice, upgrading SMEs to meet foreign and domestic affiliates' requirements, improving the supply chain management and providing entrepreneurship training.

It is my fervent hope that this publication will contribute to our understanding of how mutually beneficial TNC-SME linkages can be promoted, thereby paving the way from policy formulation to policy implementation.

Supachai Panitchpakdi
Secretary-General of UNCTAD

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The following authors prepared the reports and country case studies included in the publication: Tilman Altenburg (overview), Fausto Cassemiro and Paulo Resende (Brazil), Sailendra Narain (India), Rajah Rasiah (Malaysia), Clemente Ruiz Duràn (Mexico), Glen Robbins (South Africa), Fred Zake (Uganda). At UNCTAD, Mark Bloch, Delane Botelho, Sam Iga, Victor Konde, Pamela Heijmans, José Luis Lopez, Ming Liu, Filippo Montesi, Raimund Moser, Mike Pfister, Jan Prothmann, Bernardo Chimal Ramirez and Yee Kwan Tang provided inputs and helped to finalize the different chapters. The publications benefited from the overall editorial comments of Mark Bloch, Tiese Manigo Gilardoni and Vanessa McCarthy, who together with Karima Aoukili and Christopher Corbet, helped with the desktop publishing.

Chapter I

OVERVIEW ON INTERNATIONAL GOOD PRACTICES IN THE PROMOTION OF BUSINESS LINKAGES

1. Introduction

UNCTAD research has shown that business linkages represent one of the best ways for SMEs to enhance their competitiveness and acquire a series of critical missing assets, such as access to international markets, finance, technology, management skills and specialized knowledge (UNCTAD 2001, 2005). Our insights and experience over the past 30 years show striking – and growing – differences between countries in their ability to compete and grow. They also show how markets by themselves are not enough to promote sustained and rapid growth: policies matter, as do the institutions that formulate and implement them. There is an important role for government policies, but not in the earlier mould of widespread intervention behind protective barriers (UNCTAD, 1999).

In a globalizing world economy, governments increasingly need to address the challenge of development in an open environment. Foreign direct investment (FDI) can play a role in meeting this challenge. Indeed, expectations are high, perhaps too high, as to what FDI can do. But it seems clear that transnational corporations (TNCs) can contribute to development – and do so significantly and visibly. Thus, the relationship that has emerged between host country governments, particularly in developing countries, and TNCs over the past 15-20 years can develop further with potential benefits for all concerned (UNCTAD, 1999).

This publication provides a synthesis of UNCTAD's country studies on the promotion of TNCs and small and medium sized enterprises (SME) linkages from a policy perspective. Its main purpose is to provide effective policy recommendations which are backed by empirical evidence, taking different levels of development of host countries into account. Policies are decisive for influencing host country spillover effects from TNCs.

The six countries included in the survey are: Brazil, India, Malaysia, Mexico, South Africa and Uganda. The case studies provided an insight into policy options that are representative of both low- and middle-income countries. In addition to the six country studies, the introduction also draws on best practices in linkages building. Section 1 discusses the increasing importance of FDI; section 2 maps the steps to be followed to create a conducive investment climate as well as a systemic policy approach to linkage building; section 3 describes the different types of business linkages; section 4 discusses strategic FDI attraction as well as the role and measures available to governments and investment promotion agencies to promote and strengthen business linkages; section 5 presents the core elements for developing a business linkages programme.

2. The increasing importance of FDI

FDI inflows into developing countries have risen dramatically during the 1980s and 1990s, reaching an all-time high of almost $250 billion by the year 2000. After a slump between 2000 and 2002, FDI recovered and almost regained its previous level in 2006 (UNCTAD, 2007). The index of "transnationality", which measures the importance of foreign affiliates in total economic activity, is clearly on the rise in developing countries (UNCTAD, 2005)[1]. Furthermore, FDI is less erratic than other capital inflows, especially portfolio investments. Although FDI inflows to the developing world greatly concentrate on a few countries, with the top five recipients (i.e., China, Hong Kong/China, Brazil, Mexico and Singapore) accounting for 60 per cent of total inflows, inflows to Africa and to the group of least developed countries also rise on average. Even though the share of least developed countries (LDCs) in world FDI inflows (2 per cent) remains at a low level, the shares of FDI inflows in gross fixed capital formation are greater for LDCs than for other developing countries (20 per cent compared to 10 per cent) (UNCTAD, 2007). The case study of Uganda for example demonstrates that almost 50 per cent of the larger enterprises operating in the country are TNCs, and these often dominate their respective sectors (e.g. the brewery industry and the telecommunications sector) (Zake *et al.*, 2005). Hence FDI is a relevant factor in the economic development of most countries, even the poorest.

The relevance of FDI to the host economy underlines the importance of a thorough understanding of the role of

[1] The index is a measure of the relative importance of FDI inflows and inward stock, value added of foreign affiliates and FDI employment in the host economy.

Box 1. Global players from emerging markets

The increase in enterprise internationalization from emerging economies has contributed to a rise in the number of TNCs from developing countries and economies in transition. The reasons for investing abroad are largely the same for SMEs as for large firms, but the relative importance of the different factors may vary. In particular, while SMEs can be found in all types of OFDI, they tend to cluster in market-seeking and efficiency-seeking activities. OFDI from developing countries and transition economies has risen rapidly, from $149 billion in 1990 to $1.4 trillion in 2005. These economies together accounted for 13 per cent of the world's OFDI stock in 2005, compared with 8 per cent in 1990. More enterprises from emerging economies are now among the global players. The number of such firms reported in the Fortune Global 500 rose from 19 in 1990 to 58 in 2006.

A key driver of OFDI is competitive pressure. In a rapidly globalizing world, companies can no longer count on their home markets as a relatively secure source of profits. Competition from foreign firms is everywhere – through imports, inward FDI and non-equity forms of participation. These conditions make it all the more important for firms to pay attention to their competitiveness, and OFDI can influence and even be a dominant factor for the growth and success of businesses. Another significant driver is the improved regional economic environment. In all regions, geo-cultural proximity and affinity, and regional economic integration were important influencing factors. The need to follow customers, to offset competitors' strengths, to access low-cost labour and to take advantage of business opportunities (such as in real estate, infrastructure or services projects and privatization) were specific motives.

Eng Teknologi Holdings Bhd (ENGTEK) is an example of a developing country enterprise which participated in TNCs' value chains and was able to upgrade and move up the chain to become TNC. It was launched some 25 years ago with $200 in seed capital as a tiny family-run venture that produced jigs and fixtures in a makeshift backyard facility in Malaysia. Today, the company is a global supplier for the computer hard disk drive and semiconductor industries, with nine affiliates in four countries. In 2007, its 2,000 employees generated total revenues of about $63 million. Since 1993, it has been quoted on the Kuala Lumpur Stock Exchange, moving to the main board in 1999.

Among the factors behind the successful internationalization of ENGTEK was an entrepreneurial drive and commitment by management, along with a national policy environment conducive to enterprise development and shared by the company. Another key factor was that ENGTEK was engaged in closely knit partnerships with TNCs. For example, Intel provided the financial and technical assistance needed by the company to produce semi-automated wire bonders in 1981. With such partners as Advanced Micro Devices (AMD), Bosch, Fujitsu, Hewlett Packard, Maxtor, Readrite and Seagate, ENGTEK has been involved in designing products, bringing its specific experience in product development and gaining a competitive edge over potential competitors. As a first-tier supplier company, ENGTEK has been able to link up to the global production systems of its TNC clients, moving up the value chain over time. Partnerships also helped ENGTEK to internationalize and to become a TNC in its own right.

Source: UNCTAD (2007, 2001) Moran, Graham and Blomström (2005): 376.

FDI in the development process and appropriate policies for attracting FDI and maximizing its benefits.[2] In this respect, Lall and Narula state that "it is difficult to see how host countries that have FDI can tap its potential fully without such strategies as local content rules, incentives for deepening technologies and functions, inducements to export and so on" (Lall and Narula, 2004). Chang also suggests that trade liberalization and the abolition of TRIMs means "kicking away the ladder" (Chang, 2002) for technological upgrading of firms in developing countries.

Other scholars hold converse opinion. Moran, Graham and Blomström argue that FDI has favourable implications for host country development in general only if it is *not* subject to trade and trade-related restrictions, whereas "FDI in protected host country markets leads to an inefficient use of local resources and subtracts from local economic welfare. Foreign investors in countries with domestic content, joint venture, and technology sharing requirements deploy production techniques lagging far behind the frontier in international industry. Foreign affiliates with older technology and less efficient plants are not good candidates to develop from an infant industry to a robust world competitor."

Although World Trade Organization (WTO) protocols[3] nowadays severely restrict the use of many traditional industrial policy tools, there still is some scope for "soft inducement" (especially in countries with a strong

[2] For an overview of UNCTAD thinking on FDI, see Fredriksson (2003).

[3] Especially the WTO protocols on Trade-related Investment Measures (TRIMs), Trade-related Aspects of Intellectual Property Rights (TRIPs) and Subsidies and Countervailing Measures Agreement (SCM).

Box 2. The TRIMs Agreement and local content requirements

The TRIMs Agreement, which entered into force on 1 January 1995, specifies in its article 2 that,"[w]ithout prejudice to other rights and obligations under GATT 1994, no Member shall apply any TRIM that is inconsistent with the provisions of article III or article XI of GATT 1994" (WTO, 1995). An illustrative list in the annex of the agreement describes measures that are inconsistent with articles III (4) and XI (1). These cover essentially the following types of measures: local content requirements; trade-balancing requirements; foreign exchange balancing requirements; and restrictions on exportation. The agreement bans not only TRIMs that are mandatory, but also those whose compliance is necessary in order to obtain an advantage; it applies only to investment measures related to trade in goods; it does not cover trade in services. Article 4 of the TRIMs Agreement allows developing countries to deviate temporarily from the obligations of the agreement, as provided for in article XVIII of GATT and related WTO provisions on safeguard measures for balance-of-payments difficulties. With regard to transition periods, developed, developing and least developed countries were given, respectively, two, five and seven years from the date of entry into force of the WTO agreement to eliminate notified TRIMs.

The issue of the economic efficiency of local content requirements in creating linkages between foreign affiliates and local firms has been much debated. Some studies have argued that, under certain circumstances, mandatory measures can be useful in giving local firms the opportunity to build supply capabilities (Balasubramanyan, 1991; Halbach, 1989). Evidence suggests that local content requirements contributed to the development of supplier industries in the Republic of Korea (Wong, 1992), Taiwan Province of China (Dahlman and Sananikone, 1990), Brazil, Mexico and Thailand before the 1990s (UNCTAD, 2000a). One study found that local content and other market reservation schemes had a positive influence on the development of domestic suppliers to foreign affiliates geared to domestic markets (Halbach, 1989: 16–17). The case for local content requirements rests essentially on the need to promote infant supply firms by providing support (in the form of assured demand) during their learning periods. The issue is thus similar to that of infant industry protection. Where used carefully, with offsetting measures to ensure that suppliers face competitive pressures and have access to the technology and skills they need to improve their capabilities, they can foster efficient suppliers. Where used in a protected setting, with few pressures to invest in building competitive capabilities, they can result in inefficient suppliers that saddle the economy with high costs, outdated technologies or redundant skills.

Source: UNCTAD (2001).

bargaining power, most notably China), for restrictions in the service industries, in regional trading blocs, etc. Given the diametrically opposed rating of their impact, it is necessary to reopen the debate on the costs and benefits of compulsory and (more importantly) softer policy options aimed at encouraging FDI, maximizing positive spillovers and minimizing the welfare-reducing effects of certain types of FDI. (Box 2).

Although debate on these issues has been going on for several decades, mainstream perceptions of the role of FDI have been changing over time and restrictive policies have been replaced by widespread liberalization. Policies are decisive for influencing host country spillovers effects from TNCs. The scope of policy approaches in developing countries ranges from laissez-faire, open-door policies to restrictive policies which encumber market access for foreigners and impose national equity, technology sharing and domestic content requirements on them. Although the adequate set of policies has been subject to intense discussion for many years (e.g. in the context of the "East Asian miracle" debate on the policy factors underlying the success of the Asian "tigers"[4]), this topic remains controversial, especially with regard to trade policy and trade-related investment measures (so-called TRIMs).

In developing countries, where the domestic private sector is relatively small and has limited capacity, increased FDI flows have shaped the host economies in different ways. Consider the following (UNCTAD, *World Investment Report 2007*):

- *Developed countries remain the leading sources of FDI. FDI inflows into developing countries and countries in transition attained their highest levels ever in 2006*. FDI inflows however are concentrated on a few higher income and better endowed developing countries. A majority of least developed countries are still in unfavourable positions to attract FDI and depend heavily on official development assistance (ODA). Greater efforts are still needed to explore opportunities for and in turn, strengthen capacity of developing countries to attract FDI and to create synergies between FDI and ODA to catalyze local development.
- *An increasing part of global trade is organized by TNCs. UNCTAD estimates that they account for about 80 per cent of global trade of which a*

[4] World Bank (1993); Stiglitz (1996); Wade (1990); Lall (1994).

Box 3. Impact of TNCs on development

Most developing countries today consider FDI an important channel for obtaining access to resources for development. However, the economic effects of FDI are almost impossible to measure with precision. FDI comprises a bundle of assets, some proprietary to the investor. The proprietary assets, the "ownership advantages" of TNCs, can be obtained only from the firms that create them. Non-proprietary assets – finance, many capital goods, intermediate inputs and the like – can usually be obtained from the market also. The most prized proprietary asset is probably technology. Others are brand names, specialized skills, and the ability to organize and integrate production across countries, to establish marketing networks, or to have privileged access to the market for non-proprietary assets (e.g. funds, equipment). Taken together, these advantages mean that TNCs can contribute significantly to economic development in host countries – if the host country can induce them to transfer their advantages in appropriate forms and has the capacity to make good use of them. The assets in the FDI bundle are:

- Capital: FDI brings in financial resources to host countries. FDI inflows are more stable and easier to service than commercial debt or portfolio investment. In distinction to other sources of capital, TNCs typically invest in long-term projects;
- Technology: TNCs can bring modern technologies, some of them not available in the absence of FDI, and they can raise the efficiency with which existing technologies are used;
- Market access: TNCs can provide access to export markets, for goods (and some services) that are already produced in host countries, helping them switch from domestic to international markets;
- Skills and management techniques: Improved and adaptable skills and new organizational practices and management techniques can yield competitive benefits for firms as well as help sustain employment as economic and technological conditions;
- Environment: TNCs are in the lead in developing clean technologies and modern environmental management systems. Spillovers of technologies and management methods can potentially enhance environmental management in local firms within the industries that host foreign affiliates.

The development impact of FDI, however, also depends on the dynamics of the transfer of technology and skills by TNCs: how much upgrading of local capabilities takes place over time, how far local linkages deepen, and how closely affiliates integrate themselves in the local learning system. The extent to which TNCs dynamically upgrade their technology and skills transfer and raise local capabilities and linkages depends on the interaction of the trade and competition policy regime, government policies on the operations of foreign affiliates, the corporate strategies and resources of TNCs, and the state of development and responsiveness of local factor markets, firms and institutions.

Source: UNCTAD (1999).

third is intra-firm trade. Significant increase in FDI mirrors the global strategies pursued by many of the leading TNCs. These TNCs increasingly split their production functions into different sub-processes and locate them to different countries and locations (UNCTAD, *World Investment Report 2007*). The location choice is often based on the cost, availability of specific production factors and the market conditions required for each of these processes.

- *The most important change in the sectoral and industrial pattern of FDI over the past quarter century has been the shift towards services* accompanied by a decline in the share of FDI in natural resources and manufacturing. Recently, however, FDI in the extractive industries of resource-rich countries has rebounded and its importance in infrastructure services is also rising. The commodity price boom provides a significant opportunity for some low-income but high resource-endowed countries to raise income by attracting FDI in extractive industries for economic development and poverty alleviation.
- *There is a substantial rise of FDI outflows from developing and transition economies.* They are important new sources of FDI for other developing and least developed countries (LDCs), hence giving rise to South-South FDI.
- *South-South FDI is more likely to create an immediate impact on local economic development and technological absorption of recipient developing countries,* because technological gaps and business models are relatively closer between developing countries TNCs and host-country firms, in particular in the case of intra-

regional South-South FDI which is strengthening in Asia and Africa.

- *Extensive offshoring of services by TNCs to reduce costs strengthens developing economies' participation in subcontracting and exporting* a wider range of service activities that cover both low value and high value-added functions.

3. Creating a Conducive Investment Climate

Determining the potential for TNC and local SME linkage building should begin with an analysis of the host country's investment climate and largely depends on the level and nature of investment by private enterprises. A conducive investment climate creates opportunities and incentives for private enterprises, both foreign and domestic, to increase their levels of productive investment and innovation. Thus, embedding the private sector into the local economy contributes to its long-term, sustained development.

A national policy framework that influences investor behaviour includes general, legal, institutional and regulatory measures governing the operations of all businesses, irrespective of foreign or domestic ownership. It also incorporates specific FDI measures governing the entry of foreign investors onto the domestic market and standards of treatment and protection for such investors.

The UNCTAD Investment Policy Reviews of over 20 developing countries suggest that specific FDI regulations have increasingly become a less important impediment to FDI inflows and cases of poor or discriminatory treatment of foreign investors are less frequent. This reflects the overall trend of liberalization of FDI regimes across developing countries and their deliberate effort to attract FDI to boost local economic development. Specific FDI attraction policies will be discussed in Section 4.

However, certain general measures affecting the business environment constitute facilitating factors for the investment activities of private enterprises. They include: Enforceable property rights, an independent judiciary, an active competition policy, clear and well-defined market regulation and taxation all contribute to investors' confidence in the credibility of the policy regime in place. FDI is set to occur when the following three determining factors are present (Dunning, 1992):

- Ownership-specific competitive advantages (i.e. proprietary technology) of a transnational corporation (TNC);
- Locational advantages (i.e. large markets, superior infrastructure and low-cost resources); and
- The ability to leverage owner-specific and locational advantages via an intra-firm as opposed to an arm's length investor/recipient relationship.

Within the framework of location-specific FDI determinants, there are three main economic determinants that motivate potential investors.

- Market-seeking activity, which has become a main driver of FDI and which looks at market size, growth and structure;
- Resource or asset-seeking investment, which looks at the abundance of raw materials, low-cost unskilled or skilled labour and physical infrastructure; and
- Efficiency-seeking investment which considers, for example, input (transport and communications) and resource/asset costs.

Investors tend to favour countries with strong investment protection laws or practice, but they also attach importance to a sound track record. Their decisions are often based on the existence of a sound policy framework (i.e. foreign affiliates' standards of treatment, a stable legal and tax system, competition and trade policies) and ease of business practices (i.e. investment promotion and incentives, administrative efficiency) within the host country. Table 1 lists the policy areas and constraints which investors take into account in their investment decisions.

Table 1. General standards and policies which influence investor behaviour

Policy area	Constraints
Fiscal	Uncompetitive high tax regime with significant interpretation difficulties. Inadequate tax treaty network
Revenue administration	Widespread avoidance, arbitrary and/or corrupt assessment
Exchange control	Volatile, difficulty in access. Non-market exchange rates
Land and labour	Rigid anti-market controls with uncompetitive statutory requirements. Land titles not fully bankable
Competition policy	Pervasive private and public monopoly.
Expatriate work and residence permits	Severe labour market tests. Arbitrary and unpredictable treatment.
Sectoral regulation	Uncompetitive rules or uncertainties for investors as to rights or obligations.
Intellectual property protection	Poor legal regime and/or widespread abuse.
Environmental regulation	Inadequate legal guidance to investors on obligations and liabilities.
Corporate governance and accounting standards	Substantial gaps and uncertainties.
Rule of law	Slow or unpredictable commercial justice system. Insecure legal and personal environment.

Source: UNCTAD (2003).

Once FDI inflows begin, the possible positive affects are multifold:

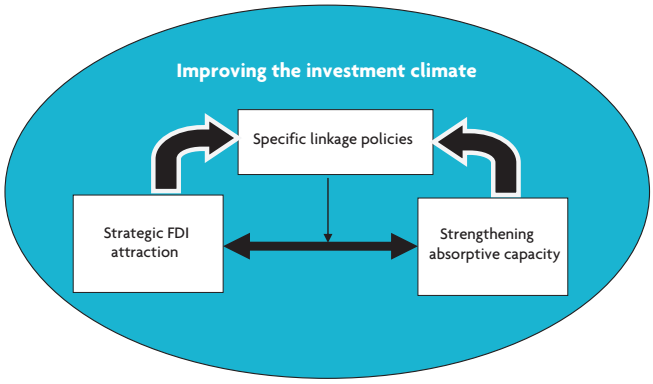
- Technology spillovers;
- Human capital formation;
- International trade integration; and
- Enhancement of enterprise development and stimulation of competition.

However, these benefits do not occur automatically and should not be taken for granted. If FDI is to stimulate and foster long-term economic growth, and if the negative effects of crowding out domestic companies are to be avoided, business linkages between TNCs and SMEs must be constructively and carefully forged.

3.1. A systematic policy approach to linkage building

A framework that integrates four key policy areas for developing business linkages is presented in Figure 1. This framework provides a systemic, yet adoptable approach for policy analysis and design conducive to linkage attraction, building and sustainability.

Figure 1. An analytical framework of a systemic policy approach to linkage building



Source: UNCTAD (2006).

These four key policy areas complement one another in a coherent framework which fulfils the mutual interests of TNCs and local enterprises, and reinforces domestic development goals:

- Improving the Investment Climate involves the adoption of changes in the legal, regulatory and institutional environment, including the development of hard and soft infrastructure. It aims to increase opportunities and incentives for private enterprises to invest, create jobs and expand, in order to strengthen the local industrial base and the competitiveness of domestic enterprises;
- Strategic FDI Attraction includes devising policies for attracting and retaining quality FDIs which have linkage potential, create positive spillovers that benefit the local economy and which strengthen strategic sectors that are vital to the development objectives of a country;

Box 4. Uganda Breweries Ltd and the Kapchorwa Commercial Farmers' Association

Uganda Breweries Limited (UBL), a subsidiary of Kenya Breweries Limited and a joint venture with Guinness Breweries Worldwide, is one of the premier breweries in Uganda. The company had procured barley from abroad for its beer brewing operations, but reconsidered its sourcing options following the entry into Uganda of South African Breweries Limited, one of the top five breweries in the world. By buying some inputs locally, UBL sought to manifest its support for the local economy, in an attempt to maintain market shares with a distinct marketing brand over its anticipated competition.

The main challenge to this new sourcing strategy was finding an intermediary between the firm and the smallholder farmers scattered in different parts of Uganda. The Kapchorwa Commercial Farmers Association (KACOFA) was subsequently identified as a possible intermediary. A partnership agreement between UBL and Enterprise Uganda was subsequently signed with the aim of increasing the production of equatorial barley by the KACOFA commercial farmers, while at the same time upgrading and strengthening their management skills. Enterprise Uganda was given the task to provide technical and managerial training to the members and to upgrade the service facilities of the association. Under the contract, UBL guaranteed KACOFA farmers a concrete purchase quantity at a minimum purchase price, an agreement that protected the farmers against commercial risks. In return, UBL was able to purchase an uninterrupted supply of barley at prices better than import prices. Furthermore, under this agreement, UBL was protected against having this barley sold to its competitor in the country.

Today KACOFA has matured into a stronger, better organized association. Compared to just two years ago, KACOFA's membership has increased nearly twofold, from approximately 1,500 to 3,000 farmers. Much of KACOFA's success is attributed to its partnership with UBL.

Source: UNCTAD (2008).

- *Strengthening Absorptive Capacity* means creating and facilitating opportunities for local enterprises to learn, internalize and utilize the management skills,

knowledge and technology made available by direct TNC linkages. This must also include stimulation of entrepreneurship for creating a group of vibrant and innovative local entrepreneurs that have both the will and ability to become international players;

- *Specific Linkage Policies* create programmes that foster and provide incentives for TNC-local SME cooperation. They aim to remove the information gap, negotiate costs of technology upgrading and facilitate the process involved in linkage building between TNCs and local enterprises.

4. Principal types of business linkages

TNC-SME business linkages are potentially one of the fastest and most effective ways of upgrading domestic enterprises, facilitating the transfer of technology, knowledge and skills, improving business and management practices, and facilitating access to finance and markets. Strong linkages can also promote production efficiency, productivity growth, technological and managerial capabilities and market diversification in local firms.

The current dynamics of global production favour the creation of business linkages between TNCs and their suppliers. However, positive spillovers into host countries through TNC-SME linkages are more likely to occur when the technological gap between foreign and local firms is relatively small. For instance, investments which target developing country's home markets are often less demanding than supplies to global markets and hence tend to be more embedded in local business linkages (Dunning, 1992, Narain, 2005). Production of labour-intensive consumer goods (such as garment, footwear, and toys) is more likely to generate local linkages than capital-intensive cutting-edge technologies where only selected developing countries have been able to develop such linkages. Entry barriers for manufacturers of key parts and components are much higher than those for indirect materials, after-market supplies and non-tradable service activities.

The four main types of business linkages that occur are between TNCs and suppliers (known as backward linkages); technology partners; customers (known as forward linkages); and those that result because from a spillover effect.

Box 5. The information technology industry in India

The information technology (IT) industry has become one of the fastest growing industries in India. India's IT industry boom began in 1990s, when the Indian software industry recorded an annual growth rate of 50 per cent, the highest of any country. In 2008, this industry is expected to contribute to 7 per cent of the country's GDP, a substantial increase from 4.7 per cent in 2007 (Government of India, 2007), and is expected to generate $60 billion in export revenues by 2010.

As a result of various deliberate support and incentive schemes to encourage IT startups, clusters of SMEs across India began to emerge. Today, strong networks of IT firms can be found in Bangalore, Hyderabad, Chennai, the National Capital Region and Pune. As in the auto component sector, the formation of IT clusters allows agglomeration of economies, promotes specialization, the development of complementary skills and collaboration among firms increases the mobility of human capital and new firm creation, facilitates the diffusion of skills and knowledge, enables benchmarking of performance to motivate innovation and upgrading and promotes technological spillover effects from linkages. All these factors helped catalyze the growth of India's IT industry.

Bangalore, in the State of Karnataka, is the location of one of the most prominent IT clusters in India, whose dynamism and competitiveness among industrial clusters has led it to be named the Silicon Valley of India. In 2005, Bangalore accounted for 36 per cent of the total software exports from India, the highest amount in the country. In addition, Bangalore houses over 1,500 IT firms and employs over 100,000 people. International technology powerhouses, including Intel, Cisco, IBM, and HP have all established offshore centres in Bangalore. Indian TNCs such as Infosys Technologies and Wipro are headquartered in the city.

Several factors have contributed to Bangalore's growth into a dominant IT cluster. It has a large pool of highly skilled IT professionals; a result of the city's highly developed educational and research infrastructure. Bangalore houses many world class institutions including the Indian Institute of Science (IISC), Indian Institute of Information Technology (IIIT) and the Indian Institute of Management (IIM). There is also a large network of regional engineering colleges. Research organizations set up by the State Government have also added to Bangalore's intellectual prominence. The presence of a wide variety of world class R&D and educational institutions also turned Bangalore into a magnet for skilled labour both within India and among the Indian diaspora that had migrated to the US to pursue higher education and seek career development, particularly in the software industry.

Source: UNCTAD (2008).

Box 6. The rise and spread of retail TNCs

Trade is a service industry in which FDI is relatively high. Over the past three decades, the home-country composition of the largest transnational retailers has shifted dramatically, away from the United States and towards European countries. The degree of transnationality of the largest retail TNCs has risen dramatically. By 2002, leading players had extended their operations to 20-30 countries. In the near future, large retail TNCs may become as transnationalized as manufacturing TNCs. Nevertheless, despite their fast foreign expansion, most of the retail TNCs cannot yet be called fully global firms as they continue to derive an important part of their revenues from their home markets. Of the retailers listed, the share of foreign sales in total sales exceeded 50 per cent in seven (IKEA, Delhaize, Christian Dior, Ahold, Kingfisher, Pinault-Printemps-Redoute, Otto Versand). For Tesco, foreign markets represented 22 per cent of sales, and for Wal-Mart 19 per cent.

With the notable exception of Africa, where smaller South Africa-based TNCs such as Shoprite and Pick'n Pay dominate, the largest retail TNCs of the world are extending their presence into Latin America, East Asia and Europe. Within those regions, retail TNCs target the more attractive markets that have larger consumer bases. In Latin America, much of the inward FDI has been directed to Argentina, Brazil and Chile; in East and South East Asia to Malaysia, the Republic of Korea, Taiwan Province of China, Thailand and, increasingly, China; and in Europe to the Czech Republic, Hungary, Poland and, to a lesser extent, Slovakia. The global spread of urbanization is the most important determinant of the fast growth of the retail industry, and its TNCs in particular. On the supply side, the combined effect of saturated home markets and good financial positions are prompting large retailers from the developed countries to try to sustain their profitability through international expansion. This leads to strong inter-firm competition in all markets.

The Benetton group is an example of a garment producer that has vertically developed and integrated 5,000 stores into its operations. Present in 120 countries around the world, it currently produces about 115 million items a year and a distribution network, generating a total turnover of approximately 1.8 billion euros. Benetton's commercial organization is based on a franchising model. This means that the Group is relying on a capillary network of small stores, mainly managed by independent partners. However, by the middle of the 1990s Benetton had changed part of his distribution strategy. It has undertaken investments in larger size stores, referred to as megastores. Some of them are directly controlled by the Benetton Group.

Source: UNCTAD 2004 and http://www.benetton.com.

- *Backward linkages with suppliers* occur when TNCs buy parts, components, materials and services from local suppliers, forming either arm's-length transactions or close inter-firm cooperation, depending on the types of advantages offered by local firms. An example of a backward linkages arrangement with a supplier can be found in (Box 4).
- *Linkages with technology partners* form when TNCs engage in joint ventures, licensing agreements, or strategic alliances with local partners, offering them access to technological and managerial know-how and offering foreign companies access to local authorities, institutions, and markets, provided partners share the same goals. An example of a linkages arrangement with technology partners is presented in Box 5.
- *Forward linkages with customers* occur when TNCs outsource the distribution of their brand name products through marketing outlets, or when TNCs producing machinery, equipment or other inputs offer after-sales services beyond the usual advice on usage and maintenance of the purchased good with industrial buyers. An example of forward linkages with customers is presented in Box 6;
- *Other spillover effects* include demonstration effects and human capital spillovers. Demonstration effects derived from TNCs offer the local business community access to new export markets, to new management techniques, and to increased inter-firm division of labour, while human capital spillovers occur as local employees in TNCs or related suppliers benefit from training provided by the TNCs.

5. Strategic FDI attraction and strengthening the absorptive capacity of domestic enterprises

Throughout the subsequent sections of this report, the experiences of six countries – Brazil, India, Malaysia, Mexico, South Africa and Uganda – are presented to illustrate the ways the main FDI determinants and aforementioned policy areas intersect and create different impacts. Although FDI attraction and the facilitation of enterprise development and linkage promotion measures should be context-specific (taking into account national development potentials,

Box 7. Developing business linkages in the north-east of Brazil

In 2005-2007, UNCTAD has developed a TNC-SME business linkages programme in the Northeast of Brazil, in partnership with several stakeholders. In the northeastern State of Pernambuco, the latest survey of the 27 small and medium sized suppliers of the three large transnational corporations TNCs (Philips, Gerdau, Alcoa) that participated in the business linkages programme showed an overall progress of 212 per cent in the areas of corporate social responsibility, quality, environment and general management after a period of ten months of technical upgrading.

These areas had been identified by the TNCs as the main suppliers' weaknesses, directly affecting their competitiveness. In the State of Ceara, 7 TNCs are upgrading 53 suppliers in the same strategic areas. In addition to strengthening the relationship with the purchasing TNCs, some suppliers started supplying other large TNCs and also initiated business among themselves. The technical training has been provided by SME support institutions at the State-level, namely the Brazilian Support Service for Micro and Small Enterprises (SEBRAE) and the National Industrial Training Service (SENAI).

Results of suppliers upgrading in Pernambuco of 27 SMEs

Strategic area	February 2008	November 2008	% Progress
Quality Management	20,48%*	53,87%	163,04%
	1,02 / 5**	2,69 / 5	
Environmental Management	4,35%	76,62%	1.661,38%
	0,22 / 5	3,83 / 5	
Health and safety at work	15,40%	53,64%	248,31%
	0,77 / 5	2,68 / 5	
General management	34,73%	72,18%	107,83%
	1,74 / 5	3,61 / 5	
Corporate Social Responsibility	17,14%	30,91%	80,34%
	0,86 / 5	1,55 / 5	
Overall	18,42%	57,44%	211,83%
	0,92 / 5	2,87 / 5	

** Percentage representing the proportion of the companies' diagnostic result of the maximum score (100%).*

*** Absolute value of the diagnostic on a 1-5 scale.*

Source: Projeto Vínculos, 2008.

socio-economic circumstances and different initial location-related FDI determinants) many, if not most, of the challenges and problems facing governments in developing countries are similar. The different experiences featured in this report provide important lessons, from which concrete implications and pragmatic recommendations that are backed by explicit examples and practices can be drawn. A majority of governments of developing countries have enacted market liberalization and implemented investment-friendly policies and measures. More sophisticated investment promotion strategies have increasingly become a significant competitive factor to attract and keep FDI. Investment promotion activities can be categorized into three main components (Wells and Wint, 2000):

- *Image-building activities* that include disseminating information and marketing a country as a favourable investment destination;
- *Investment-generating activities* to generate investment directly through targeting and forging direct contacts with potential investors for encouraging their investment; and
- *Investment facilitation services*, including investment counselling, expediting the processing of applications and permits and providing post-investment services such as after-care and investment monitoring and evaluation, aiming to retaining existing and attracting new investment.

Furthermore, investment promotion activities should be coordinated together with investment screening and the provision of incentives. In a majority of countries, specialized institutions have been established to undertake a strategic role in coordinating these investment promotion and facilitation activities. These investment promotion agencies may adopt either a generic approach applicable to promoting investment in all sectors or a targeted approach to attract and direct investments into specific sectors. The focus of investment promotion and facilitation strategy should seek to not only increase the quantity of inflows, but also to ensure the quality and sustainability of FDI in terms of benefits for domestic economic development. The potential of FDI to create linkages with local enterprises and positive spillovers is an important aspect in attracting FDI (Box 7). The quality issue is an essential consideration because not all FDI adds value to host-country development. Low-quality FDI provides few linkages opportunities, low potential for technology spillovers and short-term horizons; sometimes FDI may even cause adverse effects, including crowding out domestic enterprises instead of facilitating their development. For example, in several Latin American countries, acquisitions by TNCs or affiliates of privatized enterprises in the telecommunications and energy sectors have caused the decrease or even the closure of domestic engineering SMEs and related business support providers (UNCTAD, 2004). The challenge for developing countries, therefore, is to adopt FDI policies that are able to produce developmental effects by attracting TNCs and working together with them to forge linkages and embed them into the national economy.

5.1. The role of investment promotion agencies

Investment authorities previously charged with screening investors and imposing performance requirements have often evolved into national investment promotion agencies. These investment promotion agencies are instrumental in coordinating promotion activities and integrating support services for FDI at the national level. They provide one-stop services that cover marketing the country as an investment destination, identifying and targeting foreign investment, creating and managing databanks of potential foreign investors and local suppliers, providing matchmaking services to partners, organizing skills training for domestic entrepreneurs and providing post-investment services to investors. In order to fulfil specific local and sectoral needs, investment promotion and facilitation are sometimes decentralized to State/regional governments or specific private industrial organizations. Demonstrated in the cases of Malaysia, India and Mexico, these sub-national level investment promotion agencies often can be more responsive to local diversity in supporting and facilitating target investment and bridging the public and the private sector in the investment promotion efforts (Box 8).

Effective measures and programmes implemented at the sub-national level can provide practical models for replication. For example, although MIDA is the first contact point for foreign investment at the national level in Malaysia, specific institutions are established at the State level to promote investments and support foreign investors, as is the case in the State Government of Penang and the Penang Development Corporation (PDC). In addition local development agencies have played a key role in starting industrial and technology parks, multimedia corridors and other initiatives to promote FDI in targeted sectors.

Regardless of operating at the national or sub-national level, it is suggested the investment promotion agencies should be sufficiently independent from governments, in order to give the agencies greater credibility with investors and stronger links to both public and private stakeholders (Loewendahl, 2001). The agencies should also be equipped with a broad mix of skills, including marketing skills and other specialized skills, essential to operate in a highly dynamic commercial environment.

5.2. The role of government policies in developing specific business linkages

Different impacts of FDI on host countries derive from the fact that outsourcing practices vary by industries and host country characteristics, as well as on TNCs' corporate culture and strategy towards local sourcing and procurement which, to a large extent, is influenced by cultural features of TNCs' home country. So far, automotive and electronics industries have been growth engines for various large and small firms both in developed and developing economies (as is the case in India, Malaysia, Mexico and South Africa). Agribusiness also plays a central role in economic take-off and poverty alleviation in most locations, especially in least developed countries (as is the case in Uganda). Other industrial areas such as energy and other natural resources may be less open or feasible for business linkages. In the case of Mexico, for example, energy and natural resource sectors are still restricted to FDI.

A targeted investment strategy has proved to be a more appropriate and efficient approach to investment promotion. Many governments target the attraction of FDI and identify areas with growth potential that match well with local endowments and development strategies. UNCTAD surveys also show that promotion has been more highly cost-effective when sector-specific investment promotion is combined with firm-specific research and customized advertising (UNCTAD, 2000). The examples of India and Malaysia illustrate a government-led and targeted approach to FDI promotion and facilitation.

In India, the Government responded to FDI attraction in selected so-called 'Sunrise Industries' such as IT, pharmaceutical and automotive, as drivers for national economic growth. The Government dedicated resources to develop and improve critical infrastructure, tailored policies and measures and initiated public-private cooperation to attract and utilize FDI for nurturing these indigenous industrial sectors. The rapid development of these industries in the country brought the emergence of some large domestic TNCs. These firms are actively seeking expansion in the global market through linkages with other foreign TNCs and also greenfield investment and/or mergers and acquisitions in key markets.

Box 8. Different types of investment promotion agencies

The Uganda Investment Authority (UIA) is specifically established as a statutory body under the Investment Code 1991. The code mandates the UIA to promote investment in Uganda to both foreigners and Ugandans. It is charged with the responsibilities to carry out studies to identify investment opportunities and organizes outward and inward investment missions. It compiles profiles of foreign TNCs and Ugandan firms for matchmaking potential business partners, collects data on TNC activities in the country and disseminates information on investment. It also studies international best practices and provides policy advice on strengthening FDI to the government. In South Africa, Trade and Investment South Africa (TISA) is established as an agency for promoting foreign trade and investment. In addition to organizing marketing events, TISA is also mandated to assist local small firms in finding potential export markets and seeking linkage opportunities and to facilitate foreign investors in local sourcing and developing linkages with local suppliers.

In India, while an Investment Commission is constituted at the national level, Nasscom (National Association of Software and Service Companies) plays a pro-active and significant role in promoting FDI and encouraging foreign-local collaboration and cooperation for the IT industry. Its work involves conducting cross-country missions, organizing promotion events, matchmaking business partners, organizing trainings for local IT vendors, developing information exchange forums and providing advice to the Government on IT policies. In Mexico where an investment promotion agency at the national level has only recently been established, regional investment promotion efforts are particularly significant. For example, in the State of Baja California, the "Regional Policy of Industrial Development" for promoting foreign investment, technological development and capacity building has been integrated in 2003 into the National Development Programme 2002-2007. The regional policy was an outcome of private and public partnership and targeted two key sectors for development. The regional initiative has been very successful and has led to a tremendous export boom of the two targeted sectors. In Malaysia, the Malaysia Industrial Development Authority (MIDA) has integrated investment promotion into a comprehensive economic development programme.

Source: UNCTAD, 2008.

In Malaysia, the Government took a directing role in selecting the target sectors for FDI attraction in accordance to its national industrial strategy. The country has gone through four major phases of industrialization since 1958, based on the development strategy of each phase the Government defined those industrial sectors to be given high priority status and set long-term strategy for their development in the Industrial Master Plans. The national direction was translated at the regional level to realize the objective of benefits of strategic FDI attraction on local industrial development (Box 9).

A country's inherent locational endowments and its overall investment climate composing of general institutional, legal and regulation measures are fundamental to its attractiveness as an investment destination. Moreover, investors are often offered generous incentives to maximize their profits while minimize their costs of locating and operating within the investment site. According to Lowendahl, incentives can and do affect investment location decisions (Lowendahl, 2001). These incentives are often granted in terms of a reduction of standard income tax rates, tax holidays, accelerated depreciation, investment/reinvestment allowances and deductions from social security contributions, employment incentives, recruitment and training assistance and site or infrastructure improvements. For example, South Africa offered a Foreign Investment Grant that covered equipment and management relocation costs of investors and a Strategic Investment Programme that provided tax allowances from 50 per cent up to 100 per cent for approved strategic investment defined to have long-lasting impact on the local economy.

However, the perception of the role and effectiveness of investment incentives is not unanimous. According to *Blomström,* for example, the use of investment incentives focusing on foreign firms is not a recommendable strategy. Evidence shows, in fact, that FDI external effects, such as spillovers of technology and human capital, do not follow automatically from FDI. Thus, rather than proposing narrowly defined FDI policies, incentives should be seen as part of a country's overall industrial policy and be available on equal terms to all investors, foreign as well as domestic. Additionally, incentives should focus on those activities that create the strongest potential for spillovers, including linkages between foreign-owned and domestic firms, education, training and R&D (*Blomström, 2001).*

Establishing free trade zones or export processing zones is commonly implemented by developing countries to concentrate their resources in the establishment of advanced infrastructure. They target designated locations, in order to make these locations a springboard of export-led growth for the country. For example, the Software Technology Park (STP) scheme in India that promoted software exports specifically; the Free Trade Zone (FTZ) and

Box 9. Malaysia's Industrial Master Plans and strategic FDI attraction

Malaysia's industrial policies from 1986 to present have largely focused on pursuing an export growth strategy. The Government has laid down a long-term strategy for the development of specific target industrial subsectors in the Industrial Master Plans. The Industrial Master Plan of 1986, which encompassed the Promotion of Investment Act 1986, has selected twelve sub-sectors to be given high priority status, including electrical machinery and machinery and engineering products. The Plan recommended, among others, the consolidation of fiscal incentives to generate investments, promote linkage formation between TNCs and domestic suppliers, exports of manufactured products and human capital development. The Government also emphasized support to research and development (R&D) activities. A number of institutions have been developed to promote technology improvement and upgrading. These industrial policies helped the growth of manufactured exports since the mid-1980s. The subsequent Industrial Master Plan (II) for the period 1996-2005 and the current Industrial Master Plan (III) continued to put emphasis on exports and upgrading the targeted sectors towards high value-added products. Promoting exports, generating investment and promoting integration of indigenous Malaysian firms into regional and global networks were part of the plan.

As a targeted sector, the electrical and electronics (E&E) industry has been promoted by the State Government of Penang and the Penang Development Corporation through attracting FDI, in particular TNCs from the United States, to foster the development of the local industrial base of the region. The E&E industry could directly link the traditional local machine tool cluster in Penang to become upstream suppliers of the value chain, creating the opportunities for local machine tool firms as suppliers to foreign TNCs. The United States TNCs proved to be more open to adopt local sourcing and support local supplier development than their Asian counterparts such as TNCs from Japan and Taiwan Province of China. In Penang, a public private sector partnership enabled the development of a cohesive E&E cluster that integrates foreign TNCs and local enterprises into a multi-tier supply structure of local firms. In 2006, the E&E sector accounted for over 60 per cent of the region's (and the country's) total manufactured exports and contributed to over 50 per cent of the region's total employment (over 30 per cent of the country's).

Source: UNCTAD, 2006.

the Licensed Manufacturing Warehouses (LMW) system in Malaysia that encouraged relocations of foreign TNCs to the country; and the maquiladora zones along the US-Mexico border in support of the maquila industry in Mexico. Both Uganda and South Africa were also in the advanced stages of establishing export processing zones at the time of the study.

5.3. Measures available to governments to promote business linkages

Strengthening the absorptive capacity of domestic enterprises is vital to effective assimilation of technology and knowledge externalities that linkages may provide for them. Nevertheless, direct involvement of TNCs is necessary to activate the knowledge and technology transfer and assimilation process in linkages. A range of measures exist to promote business linkages and encourage technology upgrading, training, information and matchmaking, and provide financial assistance from TNCs to domestic enterprises (Table 2).

An important aspect is to encourage innovation in domestic firms and R&D cooperation with other firms and/or research institutes. In South Africa, the Department of Trade and Industry (DTI) has promoted a mentorship approach that involves business service providers and local institutions in providing facilities to support technology-related incubation. The programme obtained support from leading TNCs such as Siemens and Microsoft that acted as mentors to work actively with the incubators, allowing robust knowledge and technology transfer to help them grow.

The challenge for each country is to identify which kind of measures is appropriate under its specific circumstances. The ultimate aim is to strengthen productive capacities of suppliers and, in particular, help them to produce higher value-added goods and services in an internationally competitive environment. In the process, some domestic suppliers may expand internationally and become TNCs in their own right. Public and private providers of financial, technological and training support often play key roles in the process of fostering the development of viable suppliers. Without this kind of institutional support, domestic firms may be unable to get a required quality certificate, training or capital needed to become competitive. Measures related to help domestic firms link up with foreign affiliates include information provision and matchmaking as well as measures to strengthen existing linkages in the areas of technology upgrading, training and financial assistance, namely:

- *Provision of information*. Governments can act as facilitators by gathering and disseminating information on linkage opportunities and by guaranteeing the accuracy of the information provided.
- *Matchmaking.* Matchmaking implies a more active government role and focusing on the specific capabilities and needs of individual buyers and suppliers and working closely with them to reach supply arrangements.
- *Technology upgrading.* The technological capabilities of local firms are key determinants of their ability to qualify as suppliers to firms operating in increasingly competitive markets. Technological upgrading of local supplier firms is a priority for host countries, and several governments have adopted measures to encourage technology transfer from buyer firms to supplier firms and to strengthen technological cooperation between the two. Measures encouraging technology transfer from foreign affiliates to their local suppliers include:
- Technology transfer requirements to induce the transfer of technologies from TNCs, not only to their foreign affiliates and joint venture partners, but also to local firms that are subcontractors of foreign affiliates;
- Using foreign affiliates as partners in technology upgrading programmes; and
- Providing training programmes for SMEs or local suppliers in order to strengthen training and skills-development interaction between foreign affiliates and their domestic suppliers.

Other host country measures include:

- *Promoting supplier associations.* Supplier associations established with government support can help build training linkages.
- *Supporting training programmes.* Government agencies can assist large firms, including foreign affiliates, to undertake training targeted at SMEs. Training programmes can be organized with private sector entities or in collaboration with international agencies. Investments in management capabilities are probably as important as those in technological skills. TNCs in India and Malaysia, for example, have little difficulty in recruiting indigenous managers and engineers. Top managers of many foreign affiliates in Penang were native Malaysians. These local managers played a significant role in encouraging parent TNCs in adopting local sourcing and procurement practices to create linkages with domestic suppliers, thus facilitated the development of a local supplier network and promotion of specialization. An example of this is the Penang Skills Development Centre in Penang that plays an important role in putting together training courses contributed by TNCs to upgrade skills in the supplier workforce.
- *Fostering entrepreneurial development.* At its most fundamental level, entrepreneurship is about the successful development and commercialization of novel ideas. Entrepreneurship is no different than any other skill people are born with: it can be, and is likely to be, useless unless the skill is developed through education and experience (Kaufmann Foundation, 2007). For example, UNCTAD's Empretec programme (Box 10) has enhanced individual entrepreneurial capabilities for over 120,000 entrepreneurs in 27 countries since 1988. The programme identifies promising entrepreneurs; provides them with target entrepreneurial and managerial skills trainings; helps them in implementing their business plans, assists them in accessing beneficial links with large domestic and foreign companies; and puts in place long-term support systems to foster growth and internationalization of their ventures.

Table 2. Specific government measures governments to promote linkages

Technology upgrading	Training
• Partnership with foreign affiliates. • Incentives for R&D cooperation. • Home country incentives. • Promote suppliers' associations.	• Collaborate with private sector on one-stop service. • Support private sector training programmes. • Collaborate with international agencies.
Information and matchmaking	Financial assistance
• Provide relevant information. • Maintain updated electronic databases. • Act as honest broker in negotiations. • Support suppliers' audits. • Provide advice on subcontracting. • Sponsor fairs, exhibitions and, conferences. • Organize meetings and, visits to plants.	• Legal protection against unfair contractual arrangements and other unfair business practices. • Guarantee recovery of delayed payments. • Indirect financing to suppliers through their buyers. • Tax credits and other fiscal benefits to firms providing long-term funds to uppliers. • Co-finance development programmes with private sector. • Directly provide finance to local firms. • Home country measures: 1. Two-step loans 2. Using official development assistance

Source: UNCTAD, *World Investment Report 2001.*

Box 10. Features of Empretec Centres

A pioneering United Nations programme in developing entrepreneurship is Empretec, a mechanism that instils behavioural change into a select group of promising entrepreneurs, such as the ten personal entrepreneurial competencies identified by the Empretec methodology. Through behavioural change, Empretec has nurtured over 120,000 entrepreneurs in 27 developing countries (including five LDCs), with the help of more than 600 local certified trainers.

The Empretec programme also provides a one-stop shop for information and business training. Empretec Centres have forward-looking advisory boards, stimulate public-private sector partnerships and match entrepreneurs up with local institutions. Empretec workshops supply the information, training and networking that are essential for future business growth. Empretec also supports the development of curricula in formal education programmes.

The Empretec programme in Brazil has been integrated into SEBRAE, the Brazilian Service of Support for Micro and Small Enterprises that since 1972 encourages entrepreneurship. EMPRETEC/SEBRAE operates in 19 of Brazil's federal states, backing micro and small enterprises that account for 99.2 per cent of businesses in the country and generate 28.7 million jobs. In response to the needs of the public sector, Empretec also runs the Intrapreneurship (or Corporate Entrepreneurship) Training Workshop (ITW) aimed at motivating employees in large public firms and institutions, promoting a dynamic organizational culture and creating value for both internal and external users.

Source: UNCTAD, 2005a.

- *Collaboration with international agencies.* In addition to governments and the private sector, development agencies also play a significant role in installing and providing support mechanisms in developing countries to support skills development and capacity-building of local entrepreneurs and their enterprises.
- *Improving access to financial and non-financial business services.* Improving access to financial and non-financial business services is a prerequisite to support smaller domestic firms in developing countries to invest in technological and managerial resources and capabilities and human capital to strengthen absorptive capacity and further technological upgrading. Difficult access to finance is a major growth constraint for SMEs (OECD, 2005). Beyond that, there is need for market-oriented business development services, such as training consulting, technical and managerial assistance, marketing, physical infrastructure and policy advocacy. The Government of India has launched a series of comprehensive policy measures that are targeted at increasing the absorptive capacity and assisting the upgrading of domestic SMEs. These measures are designed to tackle the major barriers confronted by SMEs for development (Box 11).

6. Core elements for developing a business linkages programme

As can be seen from the case studies in this publication, a number of policies and programmes exist to create or promote business linkages. Besides policy measures, Governments and investment authorities can (and do) act as catalysts in creating linkages between TNCs and SMEs. A multi-faceted and comprehensive approach to building linkages needs to incorporate a business linkages programme to bring together the public and private sectors in creating the opportunities and ensuring its effective implementation.

Any country seeking to establish a business linkage programme needs to take into account elements that are country/market-specific and/or other influential factors in the economic, cultural and social contexts. The fundamental strategy underlying the development of a business linkage programme, in particular a backward linkage programme, is to improve the capabilities of domestic enterprises to supply inputs to TNCs which are currently being imported and to increase the potential of linkages to help move domestic enterprises into export markets. There are a number of specific factors that should be considered in executing the programme and some core elements as follows should be in place for the programme to work effectively (UNCTAD, 2006a).

- *Constituting a critical mass of purchasing companies* who can create real opportunities for domestic supply - these create the demand-side of the linkage equation. It is normally an aggregate of the inputs or purchasing requirements of a number of buyer companies that can constitute the critical mass necessary for backward linkages to occur. It is also important to have a number of companies making up the market for domestic enterprises to minimize problems of opportunistic and unfair treatment associating with over-dependence on a few dominating buyers. Effective constitution of a sustainable critical mass of purchasing companies is dependent on a conducive investment climate and strategic FDI attraction to make a significant number

Box 11. Development of Micro, Small and Medium enterprise and the Small Industrial Development Bank of India

In August 2000, the Government of India announced a comprehensive policy measure covering infrastructure, financing, innovation, technology and technical training to help increase the absorptive capacity of local Indian SMEs. In 2006, the Government further enacted the Micro, Small and Medium Enterprise Development Act which aimed to promote the design and adoption of targeted measures to help remove major obstacles of SMEs' development, including inability to access finance and obtain loans, unfair treatment of larger procurement companies, ineffective new business registration process and lack of management skills.

As a part of these initiates, financing reforms were conducted, which included raising the investment and loan ceiling of firms investing in technological improvement. Additional financial measures such as the "Policy Package for Stepping up Credit to SMEs" were also announced to promote collaborations between commercial banks and the Small Industries Development Bank of India (SIDBI).

SIDBI is the main Indian financial institution for promoting, financing and developing SMEs in India. In addition to giving long-term assistance, SIDBI also refinances loans extended by other eligible loan institutions. This organization is unique in that it also participates in the development and upgrading of local SMEs. In an initiative led by SIDBI, commercial banks were requested to develop schemes to encourage investment in technology modernization. For example, SIDBI launched a programme named SIDBI National Programme on Innovation and Incubation in 2000 which aimed to promote and facilitate incubation of knowledge and technology-based enterprises. Innovation and incubator centres were set up in research institutes with SIDBI providing funding for the building and infrastructure of the operation. In addition to financial resources, the centres provided technical entrepreneurs with management support, strategic planning and test marketing, etc.

of potential buyers available, whose business activities are embedded with the domestic market.

- *Creating a pool of qualified domestic enterprises* that are capable of supplying the goods and services that meet TNCs' (purchasing companies) requirements for quality, performance, delivery and standards compliance – these create the supply-side of the linkage equation. The availability of local suppliers with competitive costs and quality is an important determinant of the outcome of any linkage programme. Domestic enterprises in developing countries are largely hindered by supply-side constraints, hence the significance of comprehensive support and development programmes to help upgrade technological and managerial skills of domestic companies and strengthen their absorptive capacity to ensure they are "partnership-ready" to capture linkage opportunities.
- *Building an effective selection mechanism* to make presence and link potential TNCs and domestic enterprises. In particular, experience has shown that TNCs are reluctant to participate in linkage programmes unless they have some control over the selection of domestic partners, so that their confidence in the partnerships is strengthened. Getting the involvement of TNCs in the selection process, therefore, is essential to make linkage programme sustainable. Furthermore, selection should be highly focused and specific to ensure only those meeting the defined criteria are selected to participate in linkage programme while companies without such potential are filtered out. An ineffective selection would not only waste valuable resources but also jeopardize the sustainability of programme outcomes.
- *Putting in place supporting mechanisms* to assist potential domestic enterprises overcome supply-side constraints and to achieve the standards required to become suppliers to TNCs and/or large companies and ultimately to participate in foreign trade. Required support to bring domestic enterprises up to international standards usually includes technology upgrading to improve production processes and product standards; human capital development and managerial training to cope with new technologies and management skills necessary to compete in international markets; promotion of entrepreneurship to create a culture of change and the right minds of entrepreneurs and raise their skills to transform their enterprises; and access to financing to enable these companies to invest in capital equipment and human resources or other necessary expansion. Appropriate design and development of these supporting mechanisms should be based on a comprehensive business diagnosis and auditing of domestic enterprises to understand precisely their deficiencies and needs, so that critical areas for improvement can be identified and addressed.

Experience gleaned from UNCTAD's first-hand experience in assisting countries in linkage building has been

consolidated in a roster of good practices (Box 12), which provides a comprehensive list of key success factors for the development of sustainable linkages.

In sum, effective implementation of linkage programmes must be upheld by a coherent national development strategy aiming to create an investment-friendly environment, to attract strategic FDI and drive local enterprise capacity-building in a holistic way. Successful business linkage programmes rely on a clear objective for private sector development, effective public-private partnerships, well-defined roles and responsibilities and the commitment of different stakeholders to the programmes.

A pilot programme may be undertaken to help define realistic targets, targeted sector(s), programme mechanisms before committing large resources for a full-fledged programme. It is also important to be aware that, once the programme is installed, it is necessary to perform regular reviews of the rationale and mechanisms of a linkage programme to ensure its relevancy to current market conditions and effectiveness to achieve local development objectives.

7. Conclusions

The positive influence of FDI on capital formation, technology transfer, service provision and corporate social investment is reflected in countless initiatives of host country institutions and development agencies to involve TNCs in development partnerships. A majority of governments of developing countries have now enacted market liberalization and implemented investment-friendly policies and measures. More sophisticated investment promotion strategies have increasingly become a significant competitive factor to attract and retain FDI.

The role of policy in building linkages is, in itself, important but more attention needs to be given to policies that are in line with market forces and that build, in particular, on the mutual interests of both foreign affiliates and domestic firms to create and deepen linkages and foster competitiveness and economic growth. Well-targeted government intervention can tilt the balance in favour of more linkages and thereby contribute to knowledge transfers from TNCs that can feed into the development of a vibrant domestic enterprise sector. Of course, like other development policies, linkage promotion efforts need to be adapted to the circumstances prevailing in each host country and should be undertaken in close collaboration with the private sector and other stakeholders. The more linkage promotion policies go hand-in-hand with small and medium enterprise development and targeted FDI promotion policies, the more they are likely to be successful.

The linkage-building practices and experiences of the six countries featured in this report indicate that no two linkage programmes are ever the same, but rather are country/context-specific. Local conditions vary and it is therefore necessary to undertake a detailed review of the needs and demands of both domestic enterprises and TNCs, as well as the support systems available through the government, development agencies, existing industry and private institutions. Only when a comprehensive study has been carried out of the specific local situation can a linkage programme be designed to match a country's particular needs. Therefore, the direct involvement and strong commitment of key public and private stakeholders in designing and implementing a linkage programme are vital to the sustainability of a country's economic and development objectives.

Box 12. Good practices in developing TNC-SME linkages

- Encouragement, initiation and support of linkage-promoting programmes
- Support of linkage activities by internal TNC systems
- Providing funding and access to markets
- Facilitating access to finance
- Providing feedback, coaching and mentoring
- Encouragement of human development
- Contribution to technology transfer
- Support of clustering, networking and other forms of cooperation
- Encouragement of seeding
- Support of exporters, agricultural producers and gender balance
- Promoting linkages with non-business entities

Source: UNCTAD (2006).

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Chapter II

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN BRAZIL[5]

1. Introduction

Brazil has been the largest recipient of foreign direct investment (FDI) in Latin America as well as the largest source of FDI in the region since the Second World War. Brazil was also the largest host and home country for FDI among developing countries until the 1980s debt crisis, when it practically disappeared from the investors spotlights for a decade. The new market opportunities presented by privatization and financial liberalization during the late 1990s triggered a fresh upturn in FDI.

Fostering sustainable transnational corporations (TNCs)–small and medium enterprises (SMEs) linkages is fundamental to increasing the development impact of FDI. Also, there is ample evidence that the more TNCs are intertwined with local companies through suppliers or other linkages the more likely they are to maintain their operations in the country. Many of the long-established TNCs in Brazil have already built up links to local firms. These existing linkages represent a big potential for further deepening and expanding, in particular in terms of technology-intensity. Few other countries have this potential readily at hand. Therefore, linkages development can play a central role in Brazil's efforts to increase development impacts from FDI.

The analysis of linkages in Brazil will start with an overview of the recent economic developments and FDI trends in Brazil (sections 2 and 3), followed by the country's policy framework in the area of FDI attraction and business linkages (section 4), and it will conclude with case studies and lessons learned (sections 4 and 5).

2. Economic backdrop

Brazil has one of the most diversified economies in the world, backed by a strong industrial base, abundant natural resources, and a large domestic and regional market. However, structural weaknesses, such as infrastructure deficits and a complex tax structure inhibit the economy's potential.

With its immense reservoir of natural resources, Brazil has a comparative advantage in agriculture and processing of primary goods. In addition, industry accounted for roughly 29 per cent of GDP in 2007, with activities ranging from consumer goods to heavy engineering production. The services sector in Brazil, contributing approximately 66 per cent to overall GDP, is highly diversified including low cost unskilled services as well as high end professional and financial services delivered by a well developed banking sector.

From a policy perspective, Brazil underwent a series of transformations, starting with the early stages of its industrialization during the 'Vargas era' in the 1930s and early 1940s. An era referred to as the Brazilian 'economic miracle' in 1968-1973 was characterized by high growth rates, industrial diversification and trade liberalization. However, these phenomena were also accompanied by large external deficits. The oil crisis of the 1970s affected growth adversely; Brazil's external debt increased substantially and high-paced inflation developed (EIU, 2007: 4).

Inflation and depreciation remained Brazil's toughest challenge in macroeconomic policies, however repeated efforts to stabilize prices failed. In fact, between 1986 and 1991 the name of its currency changed four times. It was not until 1994 that the "Real Plan" defeated inflation, but still failed to tackle the public debt. These deficits have been financed through external indebtedness and inflows of FDI from 1996 onwards (EIU, 2007: 26). In the 1990s, Brazil started a process of liberalization and integration into the global economy, initiating large-scale privatization and promoting regulatory reforms and market opening.

Yet, since early 2000 the average ratio of investment to GDP (measured as gross fixed capital formation, see table 1) in Brazil remained under 20 per cent. There were shortcomings in the industrial capacity, leading to high costs and in addition persistent weaknesses of the backbone infrastructure. Brazil's high real interest rates continue to burden the private sector's financing costs, especially for SMEs. In addition, other factors affecting business costs, constraining investment and impeding competitiveness,

[5] This chapter is based on a report prepared for UNCTAD by Paulo Resende from Fundacao Dom Cabral (FDC) and Fausto Cassemiro from Projeto Vinculos.

Table 1. Key economic and social indicators

Indicator	1990	1995	2000	2004	2005	2006	2007
Population million	146.6	158.9	171.3	181.6	184.2	186.8	189.3
GDP at market prices (billion current USD)	469.3	705.4	602.2	604.9	795.9	1,067.8	1,313.9
Annual GDP growth (%)	-4.3	4.2	4.4	5.2	3.2	3.8	5.4
Consumer price inflation (%)	2,947.7	22.41	5.97	7.6	5.69	3.14	4.46
GDP per capita (dollars)	3,201.5	4,440.3	3,515.9	3,331.1	4,386	5,807	6,951
Total External Debt (% of GDP)	25.8	22.8	36.0	33.4	19.2	16.2	14.7
GDP by sector (percentage):							
Agriculture	8.10	5.77	5.60	6.91	5.65	5.15	5.50*
Industry	38.69	27.53	27.73	30.11	30.34	30.90	28.70*
Services	53.21	66.70	66.67	62.97	64.01	63.95	65.80*
FDI inflows (millions of dollars)	988.8	4,405.1	32,779.2	18,165.7	15,066.3	18,822.2	21,751.6*
Exports of goods and services (% of GDP)	8.20	7.72	10.66	18.00	16.8	14.7	13.9
Imports of goods and services (% of GDP)	6.96	9.49	12.18	13.33	12.4	11.7	12.3
Gross fixed capital formation (% of GDP)	20.66	20.54	21.81	18.21	18.33	**	**
HDI rank a	72	72	72	63	70	**	**

Sources: Central Bank of Brazil (2008); Human Development Report (2002), (2003), (2004), (2005), (2006), (2007/2008); UNCTAD (2008); World Bank (2008a).
[a] The HDI is composed of life expectancy at birth; the adult literacy rate; the combined gross enrolment ratio for schools; and GDP per capita in purchasing power parity (PPP) United States dollars.
* Estimates.
** No data available yet.

commonly referred to as "Custo Brasil", are the restrictive labour laws, slow and expensive judicial system and administrative regulatory weaknesses.

In terms of economic size, Brazil had risen to be the world's seventh largest economy in the late 1970s, following right behind the United States, Japan, Germany, the United Kingdom, France and Canada. Over the past 25 years though, it lost ground vis-à-vis other European countries. Using Purchasing Power Parity, Brazil was in 2007 the world's 10th largest economy.

It is worth noting that businesses in Brazil have a strong political voice through the National Industry Confederation (Confederação Nacional das Industrias, CNI), as well as the regional Industry Federations (Federação das Industrias), with the São Paulo entity being currently the most influential. These institutions have worked closely with the Government of President Lula to address the impediments to the business climate's competitiveness. Also, Brazil benefits from a strong institutional support system to SMEs including by SEBRAE (Brazilian Support Service for Micro and Small Enterprises), SENAI (National Service for Industrial Learning), and BNDES (Brazilian National Bank for Social and Economic Development).

Highly relevant for Brazil's global economic orientation is the current administration's policy of strengthening South-South relations. Brazil is taking the lead in many initiatives in other developing countries in South America and beyond. This development creates additional opportunities for Brazilian SMEs to partner with other businesses.

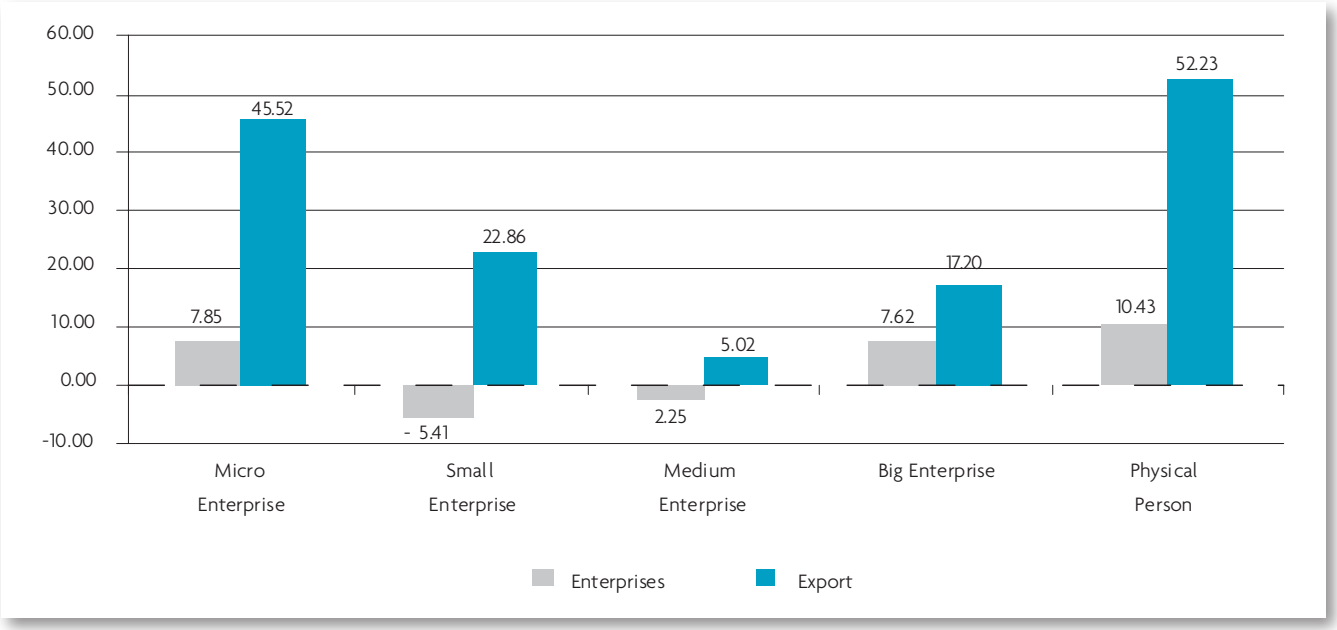
Also, the internationalization of Brazilian companies has notably increased in recent years, fuelled mainly by firms investing in the natural resource sector. In 2006, Brazil's top 20 transnational corporations lead the country to become the second largest outward investor among developing countries (FDC & CPII, 2007). The assets abroad of the latter 20 companies are equivalent to over half of the country's outward FDI stock, however also many SMEs have investments overseas. For the first time since official statistics have become available, outward flows in 2006 ($28 billion) were higher than inward flows ($18.8 billion).

2.1 Overview of the SME sector

SMEs account for 99.2 per cent of all enterprises registered in Brazil, 43 per cent of national income, 20.6 per cent of GDP, 64 per cent of labour force and 42 per cent of salaries (SEBRAE, 2008). The number of exporting firms in Brazil grew by 1.8 per cent over the years 2006-2007. Although out of the micro-, small- and medium-sized enterprises only the first category grew in numbers, all increased their exports (figure 1). From 2006 to 2007, exports from micro-enterprises rose by almost 46 per cent, mostly due to the expansion of agricultural and natural resource product exports (coffee, softwood, sugar, fresh onions). Despite a reduction in the number of small enterprises by 5.41 per cent, exports of tropical wood, pepper, olives and papaya rose by close to 23 per cent, which is above the national average 16.6 per cent for that period. The exports from SMEs rose over 2006-2007 by 5 per cent (mainly due to soya, cotton, wax and wood products).

In 2007, Brazil exported goods and services worth more than US$ 160 billion (an increase of 16.5 per cent compared to the exports of 2006, FOB), of which large enterprises accounted for 92 per cent and medium enterprises 6 per cent. The remaining 2 per cent of export share is shared among micro and small enterprises, and physical persons. In terms of most important export destinations by value of goods and services, the United States and Argentina ranked first and second, respectively, for Brazilian micro, small, medium

Figure 1. Brazilian enterprises and export value. % change 2006-2007



Source: Brazilian Ministry of Development, Industry and Commerce (2008).
Note: Micro enterprise (industry: up to 19 employees; services: up to 9 employees); small enterprise (industry: 20-99 employees; services: 10-49 employees); medium enterprise (industry: 100-499 employees; services: 50-99 employees); large enterprise (industry: more than 500 employees; services: more than 100 employees) (SEBRAE, 2007).

and large enterprises in 2007. Italy and the Netherlands also figure among the top ten export destinations for all Brazilian companies. The only African country among the top ten export destinations is Angola, notably an export destination for micro and small companies. Rising export values point out the fact that Brazilian SMEs are gaining grounds in terms of competitiveness in the world market.

Of the 5,560 municipalities in Brazil, the most important host of the greatest number of export generating enterprises is São Paulo. Almost 16 per cent of all goods and services exported by micro enterprises originate from the municipality of São Paulo; 11 per cent of small companies' exports, 6.7 per cent in case of medium enterprises and 4.2 per cent big companies' exports. Second in line for micro, small and medium companies is the municipality of Rio de Janeiro, whereas for large companies it is São Jose dos Campos. The three most important home States of Brazilian companies engaged in exports are São Paulo, Rio de Janeiro and Paraná, i.e. the southern region of the country, reflecting the distribution of industrial development in the country.

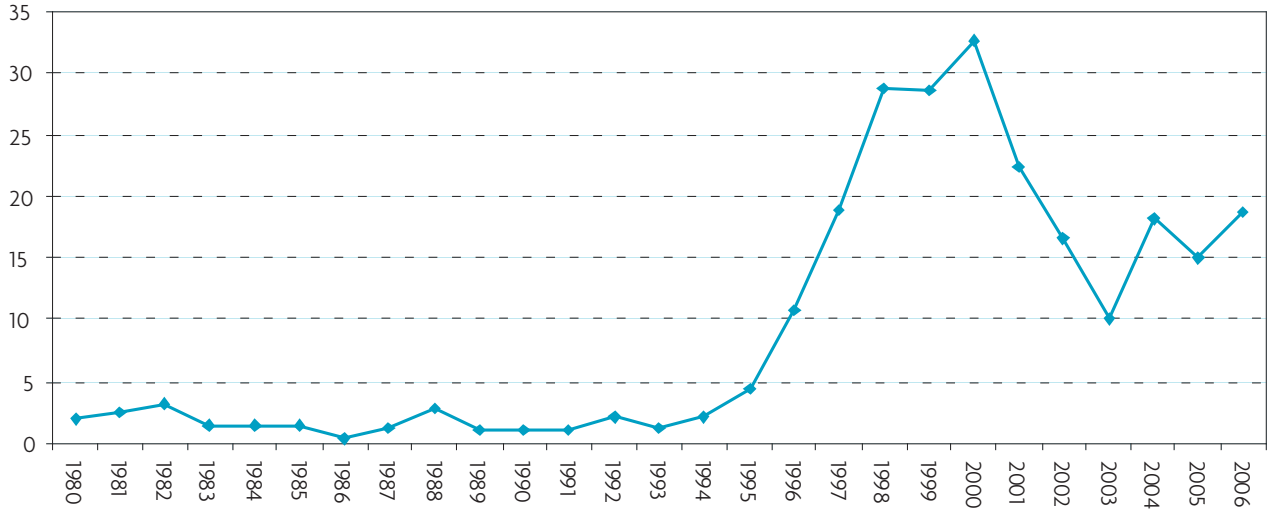
3. Recent FDI trends

Over the past decade, Brazil has evolved from the crises and economic shocks of the 1980s and 1990s, and expanded its economy with a stable macroeconomic environment. After high and chronic inflation came to an end in the mid-1990s, FDI has made an impressive comeback aided by expanded opportunities in services. By 2000 in fact, FDI inflows reached a record high of $32.8 billion, attracted by the country's size and location (figure 2). This increase was due mainly to services privatization in combination with a series of reforms restoring macroeconomic and financial stability. As to the former, Brazil's privatization programme was one of the largest in the world: from 1991 to 2002 total sales of state-owned companies to private investors amounted to $105 billion, with the largest sales in 1997 and 1998. Domestic and foreign investors each accounted for half of the purchases. Services attracted almost three quarters of privatization outlays, with telecommunications and electricity each accounting for 31 per cent of the total. With regard to the reforms, the 1994 "Real Plan" aiming at restoring monetary and financial stability proved crucial, and so did trade liberalization efforts (e.g. regional integration in MERCOSUR) and incentives for the auto industry.

FDI inflows peaked in 2000 and converted Brazil into the second largest FDI recipient among developing countries in that year (after China). Inflows between 1995 and 2004 were eight times the total of the previous 15 years. Although the upturn in FDI ended when the privatization programme wound down, FDI flows to Brazil are still significantly higher than at any time before 1996. Data from the Central Bank of Brazil shows that FDI flows started rising again in 2004 (totalling $18.2 billion), for the first time since 2000. Inflows to the manufacturing and primary sectors have shown remarkable resilience in the face of both the global downturn in FDI flows after 2000 and the slowdown of domestic economic activity. With the economic outlook improving, Brazil's large market in 2006 remained the largest recipient of FDI in Latin America and one of the top ten FDI destinations in the world.

The United States was the single most important source of FDI in Brazil in 2000, and accounted for 18.4 per cent of total FDI stock in the period 2001-2004 (table 2). However, since 1995 the Netherlands has been growing in importance and became the largest home country providing 19.7 per cent of accumulated flows over the period 2001-2004. This trend continued in 2007, with 23.7 per cent of inward FDI originating from the Netherlands (17.7 per cent from the United States).

Figure 2. Brazil: FDI stocks and accumulated inflows by country, 1995- 2007 *(Billions of dollars)*



Sources: UNCTAD (2008) and Central Bank of Brazil (2007).

Table 2. Brazil: FDI stocks and accumulated inflows by country, 1995- 2007 *(Billions of dollars)*

Country	End 1995		End 2000		2001 – 2004		2007	
	Stock	%	Stock	%	Accumulated inflows	%	Inflows	%
United States	10.9	26	24.5	23.8	13,440.1	18.4	6,073	17.7
Spain	0.3	0.6	12.3	11.9	5,118.9	7	2,202	6.4
Netherlands	1.5	3.7	11.1	10.7	14,414.0	19.7	8,129	23.7
France	2.5	6	6.9	6.7	5,038.9	6.9	1,233	3.6
Germany	5.8	14	5.1	5	2,978.1	4.1	1,801	5.2
Portugal	0.1	0.3	4.5	4.4	3,482.4	4.8	517	1.5
Italy	1.3	3	2.5	2.4	1,573.4	2.2	313	0.9
Japan	2.7	6.4	2.5	2.4	2,942.6	4	501	1.5
Switzerland	2.8	6.8	2.3	2.2	1,229.3	1.7	905	2.6
Canada	1.8	4.4	2	2	2,139.8	2.9	819	2.5
Sweden	0.6	1.4	1.6	1.5	392.2	0.5	64	0.2
United Kingdom	1.9	4.5	1.5	1.4	1,420.2	1.9	1,053	3.1
Argentina	0.4	0.9	0.8	0.7	301.9	0.4	70	0.2
Belgium	0.6	1.3	0.7	0.6	184.7	0.3	91	0.3
Tax havens*	4.2	10	13.5	13.1	13,293.6	18.2	4,245	12.36
Other countries	5	11.9	11.4	11.1	5,037.7	6.9	6,319	18.24
Total	42.2	100	103	100	72,987.7	100	34,335	100

Source: Central Bank of Brazil (2005), (2008).
Notes: TNCs often invest from countries other than their home-country. Official statistics, however, only report the origin of the investment.
* Antigua and Barbuda, Dutch Antilles, Bahamas, Barbados, Bermuda, Cayman Islands, Channel Islands, Panama, British Virgin Islands.

Dutch companies have primarily become large investors in Brazil's food and beverages industry, telecommunications, retail trading and financial services. Recent investment from the United States has been directed at services (especially to telecommunications and electricity along with financial services) and manufacturing (mainly food and beverages, chemicals, machinery and equipment, and the automotive industry).

Until the mid-1990s, Germany, France, Switzerland and Japan were important home countries of Brazilian FDI stock (table 2). Since the marked increase in FDI inflows from 1995 the list has grown to include Spain and Portugal, the two of which together accounted for 11.8 per cent of total FDI stock in 2001-2004, compared with just 0.9 per cent in 1995. Most of their FDI went to telecommunications, electricity and financial services and was related to privatization efforts mentioned above. Companies from Germany, Switzerland and the United Kingdom have in 2007 stepped up their investment when compared to the accumulated flows over 2001-2004. FDI from tax havens is also large and almost doubled its share of total FDI in Brazil between 1995 and the period 2001-2004, however it slowed down in 2007.[6]

[6] The nationality of investors generating these inflows is not known, but private sector sources in Brazil agree that part of them originates from Brazilian citizens and companies, probably for tax reasons. The high share of Tax Havens in outward FDI from Brazil tends to confirm this view.

Table 3. FDI stock, 1995 and 2000 and inflows by sector 2001-2004, 2007 *(Billions of dollars)*

	1995		2000		2001-2004		2007	
	Stock	%	Stock	%	Cumulative inflows	%	Inflows	%
Primary sector	0.9	2.2	2.4	2.3	4.7	6.4	4,751	13.8
Manufacturing	27.9	66.9	34.7	33.7	29.8	40.8	13,481	39.3
Services Of which:	12.9	30.9	65.9	64	38.5	52.8	16,103	46.9
Telecommunications	0.4	1	18.8	18.2	14.1	19.3	551	1.6
Holdings	5	11.9	11	10.7	3.2	4.4	376	1.1
Financial intermediation	1.6	3.9	10.7	10.4	4.9	6.8	4,524	13.2
Electricity and gas	0	0	7.1	6.9	4.8	6.6	1,055	3.1
Commerce	2.9	6.9	10.2	9.9	5.9	8.1	2,759	8.0
Other services	3	7.2	8.1	7.8	5.6	7.6	6,838	19.9
TOTAL	41.7	100	103	100	72,987	100	34,355	100

Source: Central Bank of Brazil (2005), (2008).

TNCs were instrumental in building up a sizeable manufacturing sector in Brazil (Chudnovsky, D., Kosacoff, B., & Lopez, A., 1999). Manufacturing accounted for nearly three quarters of total FDI inflows by the end of the 1980s and 67 per cent of the FDI stock in 1995 (table 3). Although FDI has since increased in all sectors, it has been concentrated more in services. By 2000, services accounted for 64 per cent of total FDI stock. Average services FDI remained high in the period 2001-2004, at just over half of the total, however on an annual basis the FDI stock had declined to 41.9 per cent by 2004 following the slowdown in privatisation, but it raised again in 2007 (47 per cent).

FDI in the primary sector has traditionally been small despite the abundance of natural resources. Until 1994, foreigners faced investment restrictions in extractive industries, and in 1995 FDI stock in the sector was only $0.9 billion, or 2.2 per cent of the total stock. After mining was opened to FDI in 1995, investment in the primary sector increased, reaching an all-time high in 2003, and accounting for almost a tenth of total FDI flows to Brazil. In the Latin American and Caribbean region, Brazil and Chile have benefited the most from natural resource seeking investment in recent years, boosting the primary sector's FDI share up to almost 14 per cent in 2007. For Brazil, steel was one of the main sectors of investment, reflecting a combination of natural resource- and market-seeking strategies (ECLAC, 2007). FDI in agriculture is generally negligible but FDI is prominent in agro-processing, including food and beverage production.

Brazil attracted mostly market-seeking FDI, with little investment driven by efficiency-seeking motives. Market-seeking investors target new untapped sources of demand, finding national presence cheaper than exports to that market. Efficiency-seeking TNCs look for economies of scale or scope, and attempt to integrate their various national activities into their global operations; this is why they tend to be referred to as "global integrators."

Interestingly, while many countries are struggling to attract global integrators, many of them have been in Brazil for a long time. In fact, over 400 of the Fortune 500 firms are present in the country. But typically, firms in manufacturing (and of course in services) have entered Brazil to tap the local market, with limited impact of FDI in terms of increasing the technology intensity and innovative capacity of the domestic economy. TNCs in Brazil often retain separate operations designed for local supply and distribution only and not linked to the global supply network. Sometimes sheltered by tariffs, these operations are not efficient by global standards.

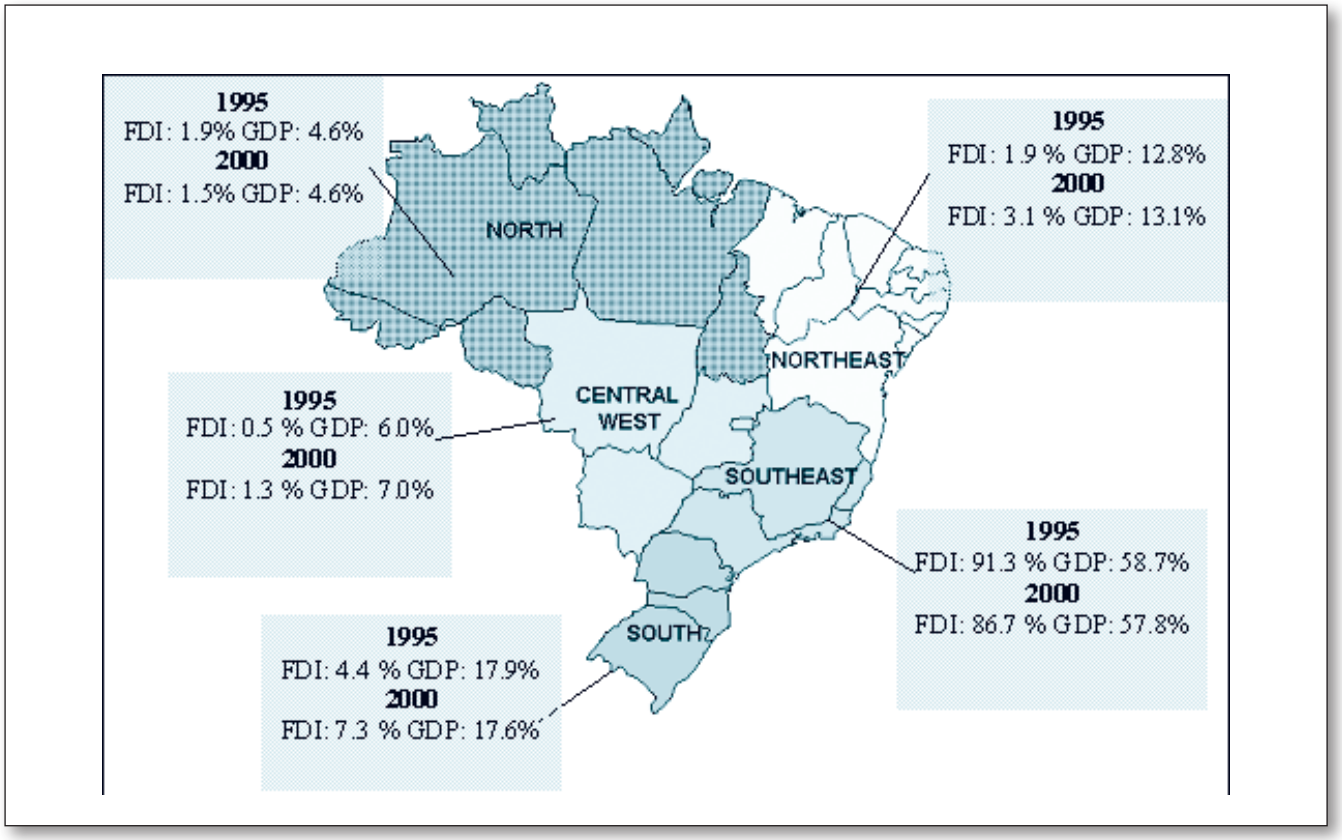
However, some global integrators that are present in Brazil, such as for instance Daimler-Chrysler, have moved to link at least parts of their Brazilian operations to their global supply chain. Furthermore, IBM included Brazil in its list of Emerging Business Opportunity countries, alongside China, India and Russia. IBM has also decided to limit the number of hard disk plants to four, globally. It closed its European facility and transferred it to Brazil. Similarly, Nokia has concentrated its manufacture of telephone handsets to three locations and decided to include Brazil as one of the three. Dell is another recent arrival in Brazil, whose output is for both domestic market and exports.

The distribution pattern of FDI in Brazil follows the country's regional concentration of growth and development. FDI tends to concentrate in the fast growing States. The southeast, which is Brazil's most developed and dynamic region and includes the key States of São Paulo, Rio de Janeiro and Minas Gerais, accounted for more than 91 per cent of total FDI inflows in 1995, and more than 86 per cent in 2000 (figure 3).

Though the South-east remains the most favoured destination for FDI, data for 1995 and 2000 indicate that all other regions, with the exception of the north and northeast, have increased their share of the total FDI stock by more than 50 per cent.[7] Since the early 1990s, the so-called "fiscal wars" have played a role in such redistribution. Various State governments conducted a policy of attracting FDI in industry with tax holidays and incentives (OECD,

[7] Data for 2005 had at the time of writing not been released by the Central Bank of Brazil.

Figure 3. Brazil: Distribution of FDI Stock and GDP by Region, 1995 and 2000 *(Percentage)*



Source: Banco Central do Brazil (1996 and 2001), elaboration by UNCTAD.

Table 4. FDI outflows from Brazil and other developing economies, 1981-2007 *(Millions of dollars)*

	1981-1985	1986-1990	1991-1995	1996-2000	2001-2004	2005	2006	2007
Brazil	179	321	686	1,494.5	2,489.2	2,516.7	28,202.5	11,645.0
Total Developing Economies	2,595.8	11,215.9	35,593.4	85,969.5	59,638.1	117,579	212,258	253,145
Latin America and Caribbean	719	1,653.2	6,097.2	31,659.0	15,489.3	35,765	63,281	52,336

Source: UNCTAD, FDI Database (2008); Central Bank of Brazil (2008).
* No data available

2003). However, this fierce competition, particularly intense in the automotive sector, was often very costly for the States involved (Oman, 2000; Charlton, 2003).

FDI has not contributed to reducing regional imbalances in economic activity. All regions outside the southeast obtain a lower share of total FDI than their share of national GDP. The seven States in the north, geographically the largest region, received only 1.5 per cent of all FDI in Brazil in 2000. Of this investment, 55.8 per cent is directed to the Amazon State, and is due mainly to the existence of an industrial pole in its capital, Manaus (see box 1).

Like many other developing and transition economies, Brazil's FDI outflows have been generally increasing since the 1980s. However, Brazil's share of FDI outflows in the Latin American region decreased from 25 per cent in the early 1980s to 4.7 per cent in the years 1996-2002, before climbing again to 24 per cent in 2004 and surpassing 57 per cent in 2006 (Table 4). Despite these variations, the FDI outward stock reached USD 87 billion in 2006, making Brazil the second largest source of FDI outward stock among Latin American countries, after the British Virgin Islands (UNCTAD, 2008).

However, a closer look at the findings indicate that only a small part of Brazil's outward stock can be attributed to international production by Brazilian TNCs, with 68 per cent of the stock located in Tax Haven economies (figure 4). More than half is in 'financial intermediation', a typical activity for this type of investment.[8] In other words, a good part of outward FDI from Brazil appears to involve capital flows seeking shelter from taxation or undertaking currency transaction rather than establishing production affiliates in manufacturing or services.

[8] Most likely much or most of it is reinvested in Brazil, as suggested by the considerable amount of FDI stock in Brazil from tax havens (see table 3 above).

Box 1. Manaus Industrial Pole

Sourcing from a policy of self-sustainability and the economic integration of the Western Amazon inlands, the Manaus Free Trade Zone was established in 1967, embedded in the Manaus Industrial Pole (MIP). Nowadays, it is the second largest industry agglomeration and among the most important in South America. Its total annual revenue skyrocketed from US$ 5.9 billion in 1991 to US$ 19 billion in 2005. More than 400 firms are installed in the area, 32 per cent of which are of foreign capital (mostly United States, Japan, and the Republic of Korea), providing over 50.000 direct jobs and 350.000 indirectly only in the city of Manaus. Other areas in the region are estimated to have benefited from another 20.000 jobs.

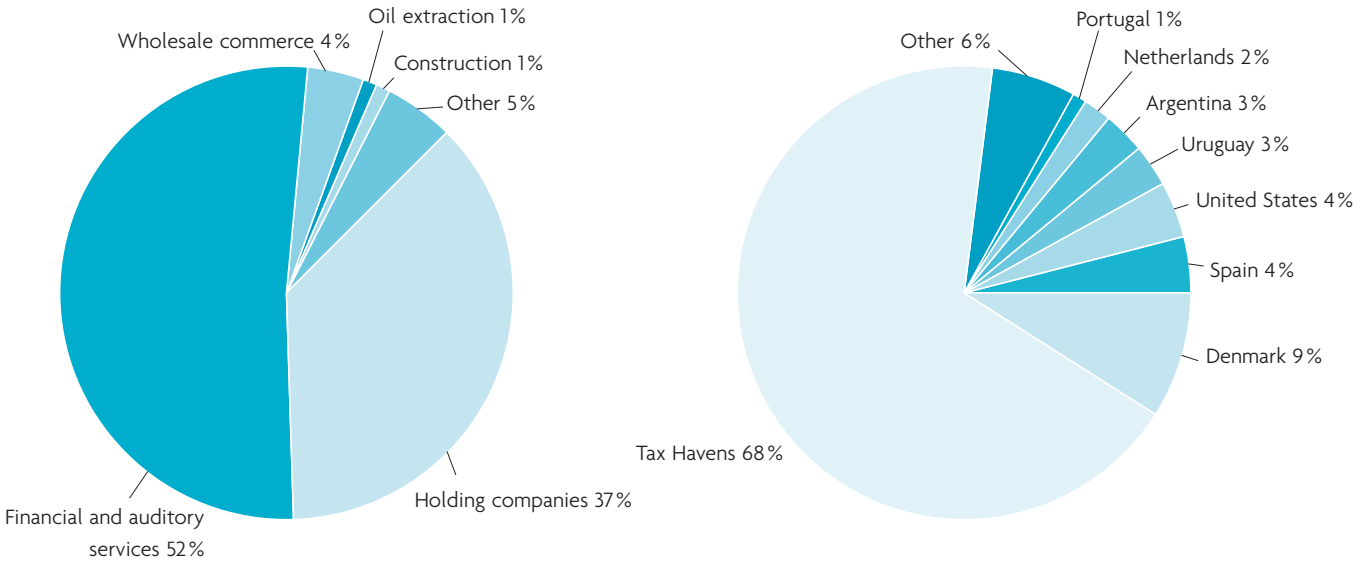
Making use of its strategic geographical position (proximity to Andean Community, CARICOM, Mercosur, NAFTA), Manaus's Industrial Pole has achieved annual growth rates of more than 20 per cent, with positive export opportunities in the future. It comprises of 17 different industrial sectors, of which 7 are responsible for about 90 per cent of the Pole's total revenue: electro-electronics, IT goods, two wheelers (motorcycle and bicycle), thermo-plastics, chemical, disposables, and watch-making. Among these, electro-electronics and the motorcycle and bicycle industries stand out as the most profitable.

The Brazilian Government stimulates investments in the area with both a variety of infrastructural improvements (roads, water supply, communication, etc.) and tax reductions, amounting to a 40 per cent more advantageous fiscal environment than in other regions in Brazil. Furthermore, the Manaus Industrial Pole can count on educational and technological support provided by 18 teaching and research institutions with undergraduate and graduate courses in such strategic areas as Production Engineering, Administration, Economics, Natural Resources, and so forth.

In terms of SME-TNC linkages, a good example is provided by the Japanese company Honda (in Manaus since mid 1970s). Since the mid 1990s nearly 80 per cent of motorcycle components are acquired in Manaus. This is due to the presence of nearly 25 suppliers (both local and foreign), some of which were attracted during the 1990s due to Honda's presence in the area. The free trade zone's administrative entity, the Superintendence of Manaus Free Trade Zone (SUFRAMA), stimulated linkages creation, working with MIP companies to attract their suppliers to Manaus, and organize supplier-production company meetings, among others.

Source: Figueiredo, P. N. (2007). Industrial policy changes and firm-level technological capability development: evidence from Brazil. Presentation prepared for the 'Meeting of Experts on FDI, Technology, and Competitiveness' UNCTAD, Geneva 9 March 2007; Suframa (2008).

Figure 4. Brazilian outward FDI stock by economic activity and destination, 2001-2004 *(Percentage)*



Source: Central Ban k of Brazil (2008).

Box 2. Embraer (Empresa Brasileira de Aeronautica S.A)

In 1969, Embraer was established as a State-owned airplane assembling company, linked to the import substitution model applied by the Brazilian Government at that time. It was envisioned to locally manufacture airplanes by means of aircraft projects designed and developed in Brazil, by Brazilian engineers and technicians. Embraer was privatized in 1990, undergoing a thorough restructuring process of product and business operations.

In addition to its five production plants in Brazil, Embraer has affiliates, offices, technical assistance and parts distribution centres in China, Singapore, United States, France and Portugal. In 2003, Embraer started operations at its first plant outside Brazil, in Harbin, northeast China. In terms of foreign assets, Embraer was ranking fourth out of the top 20 Brazilian multinationals in 2006.

The company was Brazil's largest exporter from 1999 to 2001, and the second largest in 2002, 2003 and 2004 (third in 2006). In 2008, Embraer employs more than 23,855 people, 88.2 per cent of which are based in Brazil. In addition to its outward orientation, the company is involved in local linkage creation, and e.g. co-conceptualized High Technology Aeronautics (HTA) venture. HTA, in short, is a consortium for exporting, trying to identify and address the existing needs and shortcomings in the productive chain of Brazil's aeronautical segment. Another initiative to note is the 'Memorandum of Understanding' signed in 2006 between Embraer, ANAC (National Civil Aviation Agency), BNDES, and AIAB (Brazilian Aerospace Industries Association) aimed at fostering research to further develop and strengthen the Brazilian aeronautical supply chains.

Source: Embraer (2006, 2008); FDC & CPII (2007).

The distribution by country of the outward FDI stock, excluding tax havens, shows that Spain and the United States are among the leading destinations of outward FDI from Brazil. The impact of regional trade agreements such as Mercosur on FDI can also be observed: Argentina and Uruguay are important hosts of Brazilian FDI stock abroad. The distribution of FDI outward flows from 2007 is similar; 46 per cent went to Tax Havens, 31 per cent to the United States, and roughly 5 per cent to both Argentina and Chile (Central Bank of Brazil, 2008).[9]

Brazilian investment abroad is motivated by factors such as the proximity to consumers, access to natural resources and circumventing of trade barriers. One example is Metalurgica Gerdau, the second largest non-financial TNC from Brazil, which operates steel mills in Chile, Uruguay, Argentina, Canada and the United States (IEDI, 2003). Other examples are Brazilian orange juice producers such as Cutrale and Citrosuco that faced difficulties in accessing the North American markets via exports, and consequently started operations in Florida by acquiring existing plants and forming alliances with independent distributors. Noteworthy is one of Brazil's most prominent exporters – the aeronautical company Embraer. The company is a product of innovative engineering, management and government support, as illustrated in box 2.

4. The policy framework

Following the abandonment of import substitution policies in the late 1980s, the government embarked upon a wide range of reforms. These reforms included macroeconomic stabilization, structural reforms and trade liberalization. Structural reforms included the privatization of state-owned enterprises, the deregulation of domestic markets, and the establishment of a customs union-Mercosur – with other South American countries. Trade liberalization included deep tariff cuts and the elimination of non-tariff barriers to trade. The reforms lifted the import ban posed on 1,300 products, removed all relevant non-tariff barriers. Under the MERCOSUR's common external tariff, import duty rates average has fallen to 1.5–27 per cent for consumer goods (except for cars, for which it is 35 per cent). In addition to sound macroeconomic policies, these changes paved the way to a more stable business and investment climate.

4.1. Improving the business and investment climate

Brazil has achieved strong growth with low inflation in recent years, reflecting the continued implementation of sound macroeconomic policies in the context of favourable external conditions. Brazil has reduced the need for external financing, kept real exchange rates high, restrained rising prices and strengthened fiscal accounts. Its positive results have been recognized in the recent upgrades of Brazil's sovereign risk rating to investment grade. The three pillars of the framework, which has been in place now for nearly a decade, fostering economic stability, are a) a floating exchange rate, b) an inflation-targeting regime, and c) the generation of primary surpluses.

Building on the bedrock of improved macroeconomic stability, Brazilians have moved microeconomic reforms to the fore of the policy agenda. Expanding business lending is a major objective of President Lula's economic team. Access to credit is consistently rated by firms as the greatest barrier

[9] Tax havens here: Antigua and Barbuda, Dutch Antilles, Bahamas, Barbados, Bermuda, Cayman Islands, Channel Islands, Panama, British Virgin Islands.

to operation and growth in Brazil, especially constraining SMEs and female entrepreneurs. In part, this has to do with the time needed for lenders to obtain information about a creditor's collateral, as well as with the time and costs associated with registering collateral in the first place. Reforms introduced call for broader access to credit records and seek the application of anti-trust laws to the financial sector. In addition, the administration introduced a bankruptcy reform designed to enhance creditor rights by facilitating the reorganization of bankrupt entities. As a result, a company can continue to operate, while servicing its obligations to creditors.

In addition to promoting access to credit, Brazil can help encourage entrepreneurs by reducing the time and cost it takes to start a business. The IFC (2006) states that registering property in many Brazilian States is difficult when compared to the rest of Latin America. In 12 States and the Federal District, an entrepreneur spends on average 61 days and 3.5 per cent of the property value to **register property**. This ranks 17 out of 22 countries in Latin America.

The time needed to **start a business** varies considerably depending on the State. In Brazil, the gap between the best and worst performers is eight-fold; from 19 days in Minas Gerais to 152 days in São Paulo. The latter ranks 149 out of 155 economies in terms of the time needed to start a business. In comparison, in Mexico the worst performing State only takes twice as long as the best performer (IFC, 2006).

The **judicial system** is perceived to be slow, time consuming and unpredictable, while also exhibiting little experience with commercial cases. Cost and time needed to file a case, obtain ruling from a judge, and see the decision executed varies considerably throughout different States. In Brazil, 88 per cent of commercial cases are appealed (in Argentina 13 per cent, Peru 17 per cent, and in Mexico 30 per cent).

Businesses have also difficulties with the Brazilian **tax system**, considered one of the most complicated in the world. Accountants estimate it would take 2,600 hours a year for a firm to comply with all tax requirements; the longest worldwide. While Brazil deals with more than 25 different federal, state and municipal taxes, Norway collects 60 per cent of companies' gross profit relying on only three taxes filed electronically (IFC, 2006). Even the best performing State in Brazil has tax rates almost double the average of Latin America and the Caribbean. Although a much delayed fiscal reform is likely to be approved in 2009, it will only simplify Brazil's burdensome tax system in the medium term and is unlikely to result in a reduction of high tax burdens (EIU, 2008b).

The average period of formal education among the Brazilian **labour force** stands at just five years, although new entrants in the labour market now average at least seven years of formal education. Generally, Brazil lacks behind in educational standards when compared to other Latin American countries, and the public education system is considered to provide poor preparation for the job market. The average year of schooling for people aged 15 and over is roughly 9 years in Argentina and over 7 in Mexico, whereas it was 6.5 years in Brazil in 2005 (EIU, 2008a).

Also important for the **labour market** is the fact that the power of trade unions has declined with economic liberalization and deregulation, yet they still preserve influence especially in the public sector. In recent years, employers have articulated that Brazil's high level of employment protection would hamper employment creation, but unions such as Central Única dos Trabalhadores and Força Sindical are generally opposed to the introduction of new labour legislation (EIU, 2007). As mentioned earlier, businesses have a relatively powerful voice in national politics through the Confederação Nacional das Indústrias (the National Confederation of Industry, CNI), the Federação das Indústrias do Estado de São Paulo (the São Paulo Federation of Industry, FIESP) and other provincial bodies.

Of major importance for Brazil's business and investment climate is the **physical infrastructure** at the disposal of local businesses and foreign investors, given the size of the country. As it stands now, the country's infrastructure generally requires improvement and upgrading. Large parts of the 30,000 km rail network remains in poor State, despite transporting about 25 per cent of all freight. Roads are still the most important means of transportation, but only 12.5 per cent of the existing 1.6 million km road transport network is paved, according to the National Confederation of Transport (2006). A much-delayed concessions programme for the maintenance of roads was resumed in October 2007, notably with strong interest from foreign investors (EIU, 2008a). About 80 per cent of Brazil's total merchandise export exits through its 46 port terminals, though delays are still common.

Public finance constraints over the past decade have caused underinvestment in infrastructure, leading to the bottlenecks experienced today. However, considerable financial means included in the Government's **Growth Acceleration Program** (PAC), launched in 2007, are earmarked for infrastructure improvement programs. Over the period of 2007-2010, the PAC has a budget of R$ 503.9 billion (approximately US$ 250 billion) only for investments in infrastructure (R$ 275 billion for energy projects; R$171 billion for housing and sanitation; and R$58 billion for logistics). More than R$ 80 billion will be invested in the north-eastern region, a value proportionately much bigger than its share of national GDP. This may represent a relevant opportunity to attract FDI in the short and long run, considering the modernization of infrastructure.

Also key for a sound the business and investment climate was, and still is, **trade liberalization.** Brazil has streamlined its import procedures and consolidating import regulations. Import licensing no longer applies to all goods although non-automatic requirements still affect over a third of all tariff lines or parts of lines. Also, the growing number of rules of origin, and preferential tariffs, resulting from the increasing network of preferential agreements may offset in part the impact of efforts to simplify the import regime. Export promotion remains a key element of Brazil's

trade policy. Exporters benefit from preferential credit schemes, some subject to domestic content requirements. Brazil maintains an array of incentives and assistance schemes, both at federal and state levels, to promote regional development, research or certain sectors.

Although Brazil ranks relatively low on the 2008 "Ease of Doing Business Index" (122 out of 178; World Bank, 2008c) and the 2008 "Index of Economic Freedom" (101 out of 165, mainly due to inefficient bureaucracy; The Heritage Foundation, 2008), the country receives high scores in overall fiscal freedom and low levels of government intervention. The latest "Corruption Perception Index" (Transparency International, 2007) evaluates perceptions of public corruption in 180 countries and territories, and places Brazil 72. Measuring 131 countries, the World Economic Forum (2007/2008) assigns Brazil the 72nd place in the "Global Competitiveness Report" and place 59 out of 131 in its "Business Competitiveness Index." In the latter case, the main obstacles identified by the doing business surveys included tax regulations, tax rates, restrictive labour regulations, inefficient bureaucracy, corruption and access to finance.

4.2. Attracting FDI strategically

For many decades Brazil accepted FDI only in sectors not reserved to the State and the national private sector. Changes to the investment regime were introduced in the 1990s, and many restrictions lifted after the constitutional distinction between foreign and national ownership of investment was removed in 1995. **National treatment** applies in principle and practice to foreign investments established through a Brazilian entity, representing the cornerstone of Brazil's official approach to FDI, firmly entrenched in administrative and legal practice. Brazil seems to be truly 'nationality neutral' once the enterprise becomes a Brazilian legal entity.

Foreign capital in Brazil is governed by Law 4.131 (Lei do Capital Estrangeiro) of September 3rd, 1962, and Law 4.390 (Alteração à Lei do Capital Estrangeiro) of August 29th, 1964. Both laws were inured by Decree 55.762 of February 17th, 1965, and subsequent amendments. However, **no general FDI law** in the modern sense is in place. [10]

Most importantly in the FDI context, Article 2 of Law 4.131 states that all foreign capital invested in Brazil will receive identical treatment before the law as national capital.[11] As to the Ministry of External Relations, foreign capital investment is prohibited in the following areas: activities involving nuclear energy, health services, post office and telegraph services, and the aerospace industry (Ministry of External Relations, 2007: 28f).

No bilateral investment treaties (BITs) are in force, though 12 BITs were signed, starting in the mid-1990s.[12] However, this does not appear to have impeded FDI.

Restrictions remain on FDI entry into selected sectors set out in the Constitution or in various sectoral laws. Table 5 shows that the 1995 changes produced significant liberalization, but it also illustrates where restrictions remain. In most such cases FDI is not prohibited absolutely but must receive approval on a case-by-case basis from the executive branch.

Sectoral regulations adopted in the 90s bore a particularly strong impact on FDI in the auto sector, the sectors of information technology and electronic and telecommunications equipment, suppliers of infrastructure and FDI in oil. Although there was a gradual move towards trade liberalisation, the Brazilian automotive sector benefited not only from targeted tariff protection, but also from tax concessions and preferential terms for the financing of car purchases. In addition to the waning federal incentives (in particular tariff protection which lowered progressively from 70 in the 1990s to 35 per cent in 2007) individual States introduced their own generous fiscal incentives, generating a "fiscal war" for new projects. Municipalities continue to offer companies some attractive advantages, such as the donation of sites in industrial districts, exemption from municipal taxes and subsidies of rent expenses.

Among other measures aimed at stimulating investment and reducing the tax burden on the productive sector introduced in 2005 are: tax exemptions for capital goods investment by exporters, incentives for the construction industry and the real estate market, tax benefits for companies that invest in technological innovation, simplification of the taxation of certain futures market transactions and incentives for new development projects in the North and the Northeast of Brazil. The tax-relief programme for exporters applies to all firms that earn at least 80 per cent of their revenue from exports. With regards to R&D, measures include the deduction from taxable profit of expenses for R&D, up to double the value invested, and the deduction, as an operational expense, of investment in third-party R&D (Central Bank of Brazil, 2005).

Export processing zones (EPZs) or free trade zones (FTZs) are also part of the strategy to provide competitive arrangements for exporters, and therewith attract efficiency-seeking FDI. In some developing economies, including middle-income countries such as Malaysia, EPZs have served as effective instruments for improving competitiveness. So far 17 EPZs have been permitted and four have been developed in Brazil, but according to the Brazilian Association of Export Processing Zones (Abrazpe, 2008) none are in operation, due partly to the lack of willingness of investors to establish there.

The key rationale for EPZs is that they can provide better conditions to investors than those in the economy as a whole. Such conditions include good infrastructure and utilities, liberal foreign exchange arrangements and efficient customs facilities (including well-administered drawback or exemption schemes for import duties on goods processed for export and prompt VAT refunds). EPZs can also introduce a localised corporate income tax regime that is internationally competitive.

[10] That is, a national law with principles and processes governing the regulation of FDI entry and setting out standards of foreign investor treatment and protection is not in place.

[11] For the complete legal text see http://www.sice.oas.org/Investment/NatLeg/Bra/Br4131_p.asp.

[12] BITs were signed with Chile, Denmark, Finland, France, Germany, Italy, the Republic of Korea, the Netherlands, Portugal, Switzerland, United Kingdom, the Bolivarian Republic of Venezuela, see SICE (2008).

Table 5. Main FDI entry restrictions before and after 1995

Sector	Pre 1995		Post 1995	
	Public monopoly ?	FDI restricted ?	Public monopoly ?	FDI restricted ?
Mining	No	Yes, to 49%	No	Yes*
Oil and Gas	Yes	Yes	Yes	CP*
Telecommunications	Majority public	Yes	No	Yes*
Electric power	Yes	Yes	No *	No
Petroleum refining	Yes	Yes	Yes	CP*
Media	No	Yes, to 30%*	No	Yes, to 30%*
Financial services	No	Yes	No	Yes
Air services	No	Yes, to 20%	No	Yes, to 20%*
Highway freight	No	Yes, to 20%*	No	Yes, to 20%*
Security transport	No	Yes	No	Yes
Rural land	No	Yes*	No	Yes*
Border land	No	Yes*	No	Yes*
Lotteries	Yes	Yes	Yes	Yes
Hospital services	No	Yes*	No	Yes*

Source: UNCTAD (2006).
Notes: CP: Concessions permitted; *: Case specific exceptions possible; case-by-case approval.

Recent legal changes might impact investors' interest in Brazilian EPZs. Published in Brazil's official gazette of July 1st, 2008, Law No. 11.732/2008 introduces a new tax regime applicable to the country's EPZs.[13] The law results from Provisional Measure No. 418, published on February 15th, 2008, though excluding some concessions to investors as suggested by Congress. For instance, President Lula vetoed plans for a full corporate income tax exemption and subsequent income tax reductions for EPZ companies. Prominent FTZs are for instance Tabatinga in Amazonas, Macapa and Santana in Amapa, among others. However, the most important FTZ is the Manaus Industrial Pole in the Western Amazon, actually including Macapa and Santana.

Despite these efforts, a well developed policy for investment promotion at national level has still to be developed in Brazil. To implement a successful FDI strategy, there is a need for a coordinated approach led by a central agency that works in close collaboration with its counterparts at the State level. In this respect, important initiatives have been introduced in recent years.

Organized investment promotion at the federal level in Brazil is indeed a very recent endeavour, and there is still much room for improvement. Brazil's first federal Investment Promotion Agency, Investe Brasil, opened in 2002 and operated until 2004. Although it was a small agency, with a staff of around 20 people, Investe Brasil was active in networking with all Government entities connected with the FDI process as well as with State governments. However, the agency soon ran into severe budget constraints which forced it to cease all operations.[14] Similarly, the 'Commission for the Promotion of Private Productive Investment' (also called Investments Room), launched in August 2004 with the objective to facilitate domestic and foreign investment in Brazil, experienced significant restructuring. Initially located directly within the Presidency, the Investments Room's responsibilities were taken over by APEX, Brazil's Trade and Investment Promotion Agency at the end of 2004. The Agency came into existence in November 1997 by presidential decree and operated as a special department of SEBRAE (Brazilian Support Service to Micro and Small Enterprises) until 2003, when it was renamed APEX-Brasil and began to act as an autonomous agency working in association with the Ministry of Development, Industry and Commerce.[15] Consequently, APEX now participates in the coordination of the activities of the different Government institutions and agencies involved in investment promotion in the country (a more detailed description of APEX-Brasil's responsibilities will follow in the next section). These include:

- RENAI (National Network of Investment Agencies), created in 2003 within MDIC. Its objective is to develop capacity in investment promotion at the State and regional level by organizing training and by promoting the exchange of experiences among the various agencies. It aims to establish a coherent plan of action for federal and State level entities in their investment attraction efforts.
- SIPRI (the Integrated System for Investment Promotion and Technology Transfer to the Enterprise), which is the network of national focal points (32) and Brazilian Embassies and Consulates (53) coordinated by the Ministry of Foreign Affairs (MRE). Its functions are to identify and disseminate investment opportunities in Brazil and to encourage partnerships between domestic and foreign enterprises with a view to promoting technology transfer to Brazil.

[13] See https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/lei/l11732.htm for the complete legal text.

[14] In fact, "the financial and organizational model on which it was based – as a Public and Private Partnership – (appeared) to be no longer viable". Letter from Rudolph Hohn, President of Investe Brasil, announcing the closure of the agency.

[15] It shall be noted here that Mr. Alessandro Teixeira, president of APEX, is also the president of the 'World Association of Investments Promotion Agencies' (WAIPA), located in Geneva.

Box 3. Pernambuco

The north-eastern State of Pernambuco experienced strong industrial growth between 2005-2006 (6.3 per cent), more than double the national average, and is following right behind Bahia in terms of national industrial output. Also noteworthy, in the field of mineral extraction the industrial pole of Araripina is providing roughly 95 per cent of the plaster consumed in Brazil.

The Suape Port and Industrial Complex is a well known cargo hub and distribution center, moving over 5 million tons of cargo a year. The port is the only entrance and exit for the whole north-eastern region, a consumer market with 50 million inhabitants and a gross internal product of US$ 110 billion. 70 companies have either already been installed or are currently in the implementation phase of their investment in the State. In 2003, total investment was of $1.7 billion with a creation of 5.500 direct jobs. The area is expected to attract another US$ 5 billion in investment and a further 10.000 jobs.

The Economic Development Agency of Pernambuco (AD DIPER), linked to the Secretariat of Economic Development, works towards investment promotion in the State of Pernambuco, as well as improvement of the investment climate. It is directly responsible for the administration of Pharma-chemical Industrial Pole and two more industrial districts. Major projects currently being developed or already in place include a SME Support Agency with a budget of R$ 75 million (approx. $47 million) for credits and technical assistance, an Export Promotion Service for SME, and the supervision of infrastructure improvement undertakings in nine industrial districts.

Sources: Suape (2008), Government of Pernambuco (2008).

While it is too early to assess the performance of these institutions, Brazil has certainly made concrete progress in designing a coherent framework, bringing together decision makers from relevant areas. In addition, actions at the State level are also very important. For example, the initiatives by Manaus' free trade zone supported by targeted promotion of key sectors of the economy (pharmaceutical, software, capital goods and semiconductors) can also prove essential for attracting strategic FDI.

Turning now to State agencies, they are the key to effective delivery of investment promotion. They are the natural counterparts of the TNCs located in their respective States. They should provide the hands-on facilitation needed to make investors comfortable in selecting an investment location. Out of the 15 State agencies active in Brazil, a sample of the main institutions is presented here:

- INDI (Industrial Development Institute of Minas Gerais): INDI has been working in business and investment promotion for three decades, under the auspices of the Minas Gerais Energy Company and the Minas Gerais Development Bank. Its services range from assistance in the initial business planning, conceptualization and commercialization to diversification, modernization and expansion efforts. It grants support free of charge to investors planning to enter Minas' economy, disseminating information (tax law, logistics, etc.) and establishing business contacts. In terms of linkage creation, INDI has been very successful with its "Buy in Minas" programme, a collaboration with the Italian carmaker FIAT initiated in 1989. A similar programme is envisaged to be developed with Daimler Chrysler.
- PROMO (Bahia International Business Centre): With 'Bahia Invest' and 'Bahia Export' the Bahia International Business Centre offers two well nourished online portals for business and investment promotion in the State of Bahia. Promo renders a variety of services available upon request, such as market analyses, the organization of and participation in business fairs, commercial missions and business exchanges, as well as international consulting to businesses and foreign entities and technical assistance programs for Bahian companies. The agency also works towards the identification and selection of partnerships and strategic alliances geared to creating business linkages.
- SUDAM (Superintendency for Amazon Development)[16] and SUDENE (Superintendency for Northeast Development): Regarding regional development, SUDAM and SUDENE, both linked to the Ministry of National Integration, play an important role in the north and north-eastern region of the country. Although business and investment promotion is only a component of their activities, both agencies support investment promotion. In SUDAM's case, it administers the Amazon Development Fund (FDA) – a financial scheme to support and sustain private investments in the region. SUDENE can draw from two different funds, the Constitutional Fund for Northeast Financing (FNE) and the Northeast Development Fund (FDNE). The former is precisely designed for supporting existing rural producers, individual firms and other legal entities so as to spur socio-economic development in the region.

[16] January 2007, substituting the Amazon Development Agency, see Lei Complementar N°124, de 3 de janeiro de 2007

Box 4. S-System

Brazil's "S-System" consist of six institutions; SENAC (National Service for Commercial Training), SENAI (National Service of Industrial Training), SESC (Social Service of Commerce), SESI (Social Service of Industry), SENAR (National Service of Rural Training) and SEST/SENAT (Social Service of Transport/National Service of Transportation Training). These institutions have the legal status of non-governmental Organisations, were founded by employer associations 60 years ago, and work in the area of professional and vocational training, social and technical assistance and consultancy. Financed by parafiscal levies on enterprises' payroll, the "S-System" in total disposes of a $4 billion annual budget.

Concrete examples of the institutions' activities include SENAI's Distance Learning Program, offering everything from basic education to post secondary options. Jointly, SESI, SENAI and the National Industry Federation (CNI) offer professional training in the course of their recently launched "New Industry" Programme. The latter plans to target about 16 million Brazilian workers and scheduled to invest more than USD 5 billion over the years 2007-2015. SENAR's programme "Sowing" teaches school children about the relationship between rural and urban areas and the environment. Over the years 2001-2007, it has reached more than 2.5 million students and involved 122,000 teachers from 840 municipalities in the State of Minas Gerais.

Future cooperation includes the Ministry of Labour, the Ministry of Agriculture, Livestock and Supply, Ministry of Social Development and Fight against Hunger (MDS) and the "S-System" to improve marginalized groups' access to active labour support services. Although the "S-System" is highly appreciated by the public and private sector in Brazil, there have been considerations of a possible future revision of the finance scheme, i.e. a lowering of the mandatory contributions by firms.

Source: World Bank (2008d), Montero (2005), Agencia Brasil (2008).

- AFPR (Paraná Promotion Agency): Created in 1997 with the aim to financially support urban and rural SMEs through easily accessible micro credits, vouching for debtors, and favourable tax regimes, the Paraná Promotion Agency contributes to strengthening the regions business environment. Its two most important programmes are the micro credit scheme "Banco Social", applicable in case of initializing business activities, consolidating and expanding, and a Guarantee Fund providing additional guarantees for farmers not able to back up the credits they seek.

Given the large number of State agencies involved in the implementation of broadly defined horizontal measures, the success of a FDI policy will heavily depend on coordination efforts. The federal lead agency must be strengthened to assist in the creation of new opportunities and in the coordination of investment promotion with the federal States. It should be able to support the State agencies in key tasks, lending special support to State agencies in the poorer regions.

4.3. Strengthening the absorptive capacity

The legal and regulatory environment, as well as the incentive system and business development services providing technical training and financial support, are core aspects that shape the absorptive capacities of SMEs (UNCTAD, 2006c). Micro, small and medium-sized enterprises in Brazil are considered the social force of economy, and have traditionally been high on Brazil's political agenda. In fact, the Brazilian Constitution mentions that *"micro and small companies that were created under the Brazilian law and have the headquarters and administration in the country"* should be granted distinguished treatment (article 170, IX)[17]. Despite a large pool of competitive SMEs in Brazil, many are not able to supply to TNCs due to various constraints in qualitative and quantitative requirements, standards, costs, and many other areas. Thus, local capacity building and skill development among SMEs constitute a major element in a business linkage programme.

While the report focuses on the incentive systems and business development services for SMEs, it should be noted that the education and vocational training system play a key role in skills development for SMEs. Access to **primary education** in Brazil is granted to all by tuition exemptions. The university and research institutions system is also relatively well developed. University-industry collaboration is weak; however there are some successful experiences in the south and southeastern regions. For example, the "S-System" provides technical and vocational training in Brazil (see box 4). Overall, the Brazilian labour force can draw from a relatively well educated population with additional skills development offered by the tertiary education and training.

The main Government entity responsible for the coordination of competitiveness policies to assist companies in general that support SMEs is the **Ministry of Development, Industry and Commerce** (MDIC). However, other ministries, such as those of finance, science and

[17] For Brazil's complete National Consitution see Government of Brazil (2008).

technology, national integration and others, share this duty as well. The Permanent Forum of Micro-enterprises and Small Businesses, created in 2000 and strengthened in 2007 with the "Estatuto Nacional da Microempresa e da Empresa de Pequeno Porte", is coordinated by MDIC, with the role to guide and assist the formulation and coordination of national policies that promote development of micro and small businesses. 48 government institutions and 47 entities representing the interests of small business in Brazil (e.g. SEBRAE) participate in the forum.

In 2004, the Brazilian government launched a new industrial, technological and foreign trade policy (**Política Industrial, Tecnológica e de Comércio Exterior - PITCE**), designed to raise competitiveness of Brazilian companies. The Brazilian Industrial Development Agency has been established as the executive organ of PITCE, under the supervision of MDIC. This agency's role is to promote the implementation of industrial development policies, particularly those that promote job creation, within the external trade and science and technology policies. One of PITCE's programmes is the Local Productive Arrangements Programme (Programa de Arranjos Produtivos Locais), which includes the Programme of Industrial Export Extension (Programa de Extensão Industrial Exportadora – PEIEx), aimed at SMEs in any sector and value chain. The Government provides consultants to companies to help them solve management and technical challenges and develop local production. SEBRAE and APEX cooperate with MDIC in the implementation of PEIEx, and enter in collaboration with local partner institutions to provide capacity building all over the country for companies that require assistance. In order to participate in the programme, the local productive arrangements must meet the following criteria: a) a minimum of twenty enterprises linked to one common specialized production; b) at least one hundred persons working in these enterprises; c) the final product should be homogeneous. It should also effectively contribute to increasing exports or to competitively substituting imports, have market potential, generating jobs and income.

The **Trade and Investment Promotion Agency** (APEX-Brazil) is an independent agency that works in association with MDIC and has the role of coordinating and implementing trade promotion policies endorsed by the Federal Government. Its main objective is to facilitate the access of companies, especially SMEs, to global markets. It also provides capacity building for SMEs that plan to export, supporting them in promotion and marketing activities. The agency supports export promotion projects for small business (those with maximum of 99 employees or US$3.5 million of annual revenue) in partnership with other private and public entities. The agency's financing comes from SMEs' contributions.

The **Ministry of Science and Technology** also recently developed policies aimed at promoting SMEs' technological capacity. The support for technological development and diffusion for SMEs includes: a) fiscal incentives for technological development based on reductions of different taxes (mainly income taxes); and b) instruments to finance such development. The main types of support to technological diffusion of SMEs are the availability of information and the development of research-industry collaboration. Other initiatives include incentives to start incubators, feasibility studies and access finance through venture capital.

The legal framework to facilitate SME development contains the following principal measures:

- *Law 7.256/84, 1984*: it is the first legal measure that established special treatment to micro and small enterprises. It institutionalized the "Estatuto da Microempresa", addressing administrative and fiscal issues, social security system and labour rights.
- *Law 9.317/96, 1996*: it improved the tax payment system applied to micro-enterprises, which became known as "SIMPLES Federal" (Sistema Integrado de Pagamento de Impostos e Contribuições das Microempresas e das Empresas de Pequeno Porte), a tax reduction and simplified mechanism of tax payment for SMEs. This law has been a fundamental step to reducing the bureaucratic hurdles for SMEs.
- The "Estatuto Nacional da Microempresa e da Empresa de Pequeno Porte", also called "*lei complementar 123/2006*", General Law for Micro and Small Enterprises or Super Simples, entered into force in 2007, as the first national public policy (valid for all States in Brazil). The law determines a unified payment of federal, state and municipal taxes, trying to simplifying one of the burdens for businesses considered a key element of "Custo Brazil". Nine different taxes were combined in a single payment, whose value is determined based on total revenues and sector of activity. It also includes other benefits: micro and small businesses enjoy a priority on government bids up to R$ 80,000.00 (approximately US$ 40,000.00) and are exempt from export taxes. This law, among other initiatives, is supposed to contribute to the target of reducing the average time to open a new company in Brazil from 152 days to 15 days. The 15 day target has already been achieved in some cities.

Regarding incentives and market-oriented intermediaries, the role of SEBRAE is crucial as the main business development service (BDS) provider. It is Brazil's main development agency for SMEs. The central office in Brasilia focuses on policy and evaluation issues, while the regional offices provide direct services to clients. SEBRAE is one of the few SME promotion institutions in Latin America that offers direct services to businesses and entrepreneurs, and is also actively involved in policy advocacy for SME promotion.

One of SEBRAE's largest initiatives recently has been the reform of the new general law for SMEs (Super Simples) in Brazil. Generally, each year about 460 thousand new enterprises are supported by SEBRAE, and some 190 knowledge transfer projects have been developed in the

Box 5. SEBRAE (Brazilian Micro and Small Business Support Service)

SEBRAE, a joint initiative of the public and private sector, is a non-profit private institution created in 1972 to support the development of small-sized business. It is completely independent, and does not report directly to any government department.

The Brazilian Ministry of Development, Industry and Commerce (MDIC) recognizes SEBRAE as the leading MSME institution in the country. The National Deliberative Council, made up of more than 350 institutions represented by the government, business entities, and educational and research institutions, oversees its activities. There are two arms: SEBRAE National (central coordination) and 27 branches (one for each State and the Federal District), with administrative and financial autonomy.

SEBRAE's main revenue comes from enterprises contribution (an average of 0.3 per cent of payroll, paid through the National Institute of Social Security). Out of this total contribution, around R$ 840 million, or 65 per cent is operated by state branches of SEBRAE. These resources are utilized in programmes such as credit and capitalization support, sector and regional development, and professional and technological qualification.

Source: Interview with Botelho, D. (2007), SEBRAE (2008).

area of retail businesses (as of 2004). Close to 400 projects to support micro and small industrial enterprises have been initiated, ranging from cluster developments to linkage building. SEBRAE reports that these projects have benefited over 63'000 SMEs in various sectors (SEBRAE, 2008).

Figure 5 compares the institutional budget (from the most important institutions that promote SMEs) as a percentage of national GDP in 17 Latin American countries. Brazil is the country with the largest budget, indicating the importance given to the SME sector by the Government.

Financial bottlenecks are part of the main barriers SMEs face in their operations. To facilitate access to finance, the Brazilian Development Bank (BNDES) has been established as a federal public company associated with MDIC. Its goal is to provide long-term financing to SMEs for activities that contribute to the country's development. It also seeks to strengthen the capital structure of private companies, the development of capital markets, the trading of machines and equipment and the financing of exports. BNDES is a strategic partner for SMEs since it is now the only significant source of medium and long term funding. In 2006, it spent R$ 11.1 billion for private individuals (mainly rural producers) and for micro, small and large enterprises, which represents 22 per cent of the total of disbursements in that year. Out of 122,000 operations of BNDES, 110,000 had been carried out with SMEs.

In close collaboration with the federal Banco do Brasil, Caixa Econômica Federal, Banco da Amazônia and Banco do Nordeste, BNDES administers resources to finance several programmes for SMEs, especially in the area of global market access and capacity building. Resources are channelled into funds such as:

- *National Development Fund (FND)*: was created in 1986 and aims to provide resources for public and private investments. SME credits from this fund are disbursed through BNDES and Banco do Brasil.
- *Guarantee funds (fundos de aval/garantia)*: to assist SMEs to export, offering additional guarantees in contracts that involve private agencies that provide credit. Examples include the Guarantee Fund for SMEs (*Fundo de Aval para Micro e Pequenas Empresas - FAMPE*) from SEBRAE, and the Competitiveness Promotion Guarantee Fund (*Fundo de Garantia para Promoção da Competitividade - FGPC*) from *Banco do Brasil*.

Other support programmes for SMEs are displayed in table 6.

Overall, Brazil benefits from a strong institutional framework for SME promotion to strengthen the absorptive capacities of Brazilian SMEs. The next section analyses some of the specific linkages development policies.

4.4. Creating TNC-SME linkages

Specific linkage policies result in programmes that foster and provide incentives for TNC-SME cooperation. They aim at closing the information gap, lower costs of technology upgrading and facilitate the process involved in linkage building between TNCs and local enterprises. Although a specific linkages policy is not clearly formulated and declared by the Brazilian government, there are numerous initiatives and programmes, which contribute significantly to promoting linkages. It goes without saying that some linkages also occur either through corporate initiatives or as a side-effect of other policies.

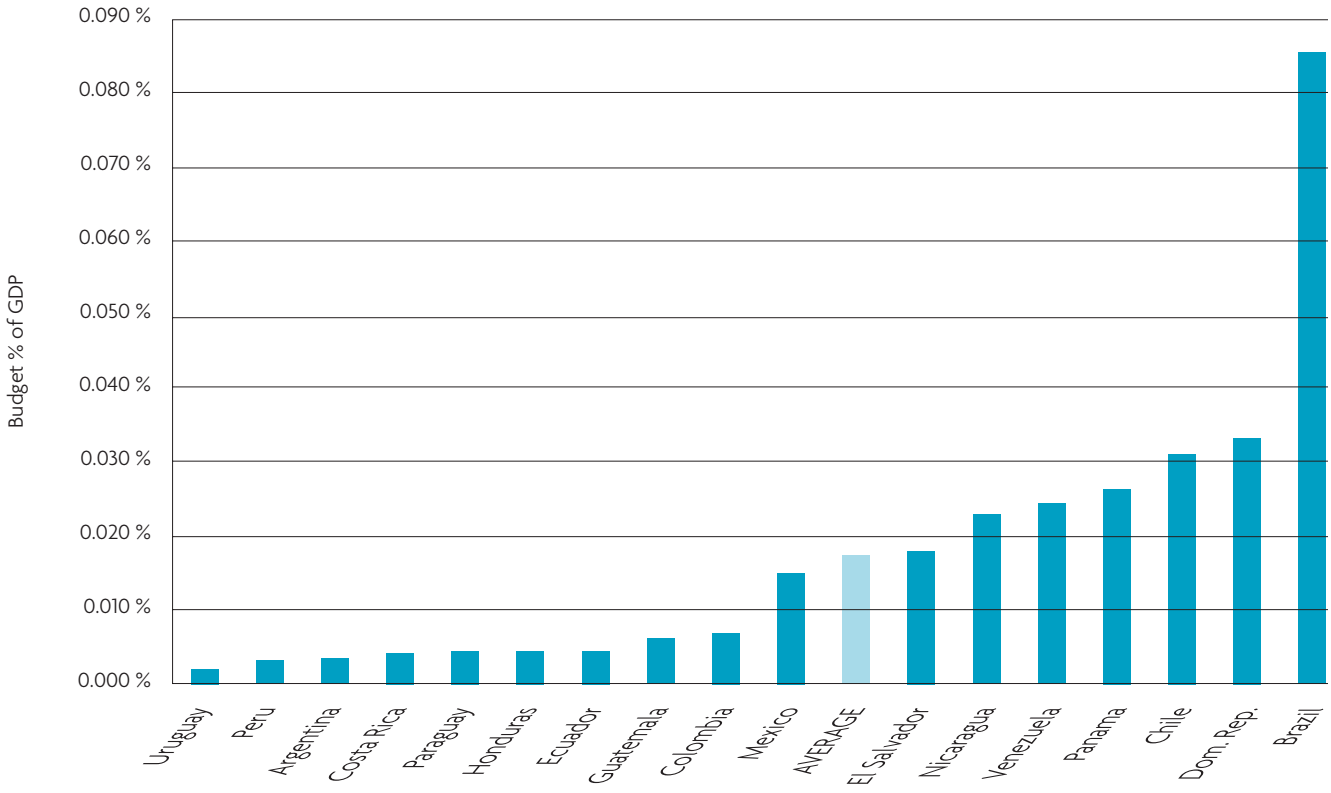
Brazil hosts some 13,000 TNCs, and it is an attractive investment location. However, FDI in Brazil is not contributing to Brazil's development to the extent it potentially could. This occurs partly due to the market-seeking objectives of TNCs located in Brazil and their consequent lack of export orientation. As mentioned before, most of the TNCs in Brazil largely cater to the domestic market. In terms of linkages, the results are relationships with companies of low to medium

Table 6. Main support programmes for SMEs in Brazil

Programme	Content
SEBRAEtec	Technological consulting service that seeks to provide solutions for specific problems of small companies that typically does not exceed 20 hours.
SEBRAE Business Incubators	Provides technical support to start-ups by an organization associated with a university, non-government organization (NGO) or government office providing affordable work-space, shared facilities, counselling, training, information and access to professional networks for selected entrepreneurial groups.
The Entrepreneurship Programme "Empreender" (SEBRAE)	Partnership between CACB (Brazilian Business and Commercial Association) and SEBRAE. It provides support for business and commercial associations composed by companies from the same core business, facilitating information sharing and problem solving. It works in more than 800 municipalities in all Brazilian States with approximately 40,000 participating firms.
The Telecenters of Information and Business (TIN)	It is a SEBRAE initiative that promotes courses and training online and on campus, information and busin4ess services to strengthen the competitiveness of SMEs and creation of new businesses. It is an instrument to join entrepreneurs, private and public organizations, NGOs and the society, composed by interconnected computers in what is called "Telecenters".
The Income and Job Generation Program "PROGER" (Ministry of Labour)	Credit lines for companies or individuals who would like to either create a new business or expand an existing one for job and income creation. It offers the entrepreneur free access to a human resource structure for recruiting, selecting and training the labour force needed. The funding comes for the most part from the "Fundo de Amparo ao Trabalhador" (Fund for Worker's Protection).

Source: UNCTAD.

Figure 5. The institutional budget of SME institutions as a percentage of national GDP



Source: IADB (2006).

technological capabilities. Some TNCs have progressed to use Brazil as a regional hub to cater the MERCOSUR market and beyond, and have developed some R&D capacity in the design of new products. Examples include some TNCs in the field of electronics in Manaus' industrial pole. However, one can observe that many of the Fortune 500 companies that are using their investment locations as core input-producers for their global value chain (world product mandate) are not following such a strategy in Brazil. There are only few exceptions as mentioned earlier, such as Daimler-Chrysler, BOSCH and IBM.

If Brazil would like to see foreign investors perform better and actually export their products/services, suppliers will need to be able to provide quality inputs. In order for linkages to be an attractive instrument for better FDI performance, the absorptive capacity of the suppliers needs to be strengthened. Brazil exhibits a wide array of policies and programmes containing elements of linkages promotion. Below is a selection of the SME, investment, technology and industrial policies[18] in Brazil identified as having the

[18] The term policy is used to address both Government guidelines as well as programmes to achieve targets and objectives.

most potential in that regard:[19] One has to note that these are federal policies, and that any regional and state-level initiatives are usually spin-offs of the former (for more information about state-level initiatives see Section 4.2).[20]

- *Clusters* have long been commended for their benefits in terms of contributing to the promotion of business linkages. Brazil for example has been documented to host some 27 innovation clusters (Bortagaray & Tiffin, 2000). Its telecommunication cluster in Campinas in the State of São Paulo is often cited as an engine for technology-led growth in Latin America (Feser, 2002). Typical interventions to promote clusters include locational incentives for businesses, industrial extensions, technical training, regulatory assistance, business incubators, and match-making meetings between companies, include SMEs and larger companies, thereby contributing to linkages creation. An important federal cluster promotion initiative in Brazil is the Local Productive Arrangements Program (Programa de Arranjos Produtivos Locais, APL), which includes the Program of Industrial Export Extension (Programa de Extensão Industrial Exportadora – PEIEx), aimed at SMEs in any sector and value chain. In this scheme, the government provides consultancy services to companies based to help them solve management and technical challenges in the relative clusters or APLs. SEBRAE is one of the major actors in implementing the APL.
- *SEBRAE promotion of linkages in the Oil and Gas industry*[21] – SEBRAE has identified 12 oil and gas clusters in 12 Brazilian States. Given the large investments in the industry over the past ten years and projected investments between 2008 and 2011 to be of the magnitude of $128 billion, SEBRAE has intensified its activities in promoting the inclusion of SMEs in the operation of large companies in the industry. It has also been identified that 80 per cent of the industry demands in supply can be offered by Brazilian companies of which the majority are SMEs. The most notable initiative is its cooperation with Petrobras since 2004, implementing 14 projects in 11 States. The SMEs' contribution is strengthened in the areas of industrial maintenance, electronics, specialized engineering, painting and assembly.
- Since 2004, SMEs in the selected projects are trained to meet global standards, such as ISO 9000, ISO 14000, SA 8000, OSHA 18001; they are upgraded in the use of information technology, project management and are provided with regular information on market opportunities and policies. Also, match-making events and business networks ("redes petro") are created, including large anchor companies such as Petroquimica, Qualitex, and Copesul.
- *"Buy in Minas" programme* – In terms of linkage creation, INDI has been very successful with this initiative, which was the outcome of a collaboration with the Italian carmaker FIAT initiated in 1989. The main objective was the establishment of a competitive network of local auto-part suppliers to the FIAT factory in the State of Minas Gerais. The programme has been a success; generating over 16,500 direct jobs and the local content rising to 71 per cent originated from 90 suppliers (UNCTAD, 2006a). The programme involved a joint effort from the Government of Minas Gerais, the Brazilian Development Bank (BNDES), the Ministry of Development, Industry and Commerce (MDIC), Vale do Rio Doce Company (CVRD), the Industrial Districts Company of Minas Gerais, the State Secretary of Economic Development and the Centro Estero Piamontese of Italy. A similar programme is envisaged to be developed with Daimler Chrysler and to expand the approach to the agro, machinery and equipment industries in the State.
- *Supplier Development Program (PQF) in Pará and Maranhão*. The "Programa Desenvolvimento de Fornecedores do Maranhão – PDF-MA" started in 1999 with 78 companies participating, and by 2007 has almost 400 active companies, in sectors including manufacturing, construction, engineering, automation and services. The programme has been established by the State Government, in association with commercial and industrial associations (such as FIEMA – Maranhão Industry Association) and SEBRAE, with CV (second largest global producer of manganese and iron alloys) and Alumar (consortium of fours big aluminium producers) as corporate leaders of the programme. It aims to provide technical and management assistance to SME suppliers; capacity building is targeted at all functional levels of the companies including operations, management, strategy, commercial promotion, technological enhancement, and certification (with specific certifications, some suppliers are entering in new markets domestically and abroad). Many activities are promoted to improve the supply chain, such as monthly roundtables with the partners and industry specialists, guided visits to the TNCs (for SMEs to get detailed information about investment projects and current and future needs of TNCs), guided visits to selected benchmark companies, and workshops sponsored by TNCs, in order to improve the communication among entrepreneurs and TNCs.

Today PDF-MA is the most important programme in the State that combines public and private initiative, with good results in terms of economic growth and increased investment in the State (including the Pólo Siderúrgico de São Luís). The funding comes from ten large companies (Albras, Alcoa, Alunorte, CCM, CV, MRN, PPSA, Imerys, Rede Celpa and Schincariol), seven of them in the mining sector. Technical support is provided by BDS providers, such as SEBRAE, National Industrial Training Service (SENAI) and

[19] The following is based on an evaluation of public policies undertaken by the Dom Cabral Foundation (2007).

[20] Notably, the policies are not available in a format that can be easily accessed and treated. Internet sources are rare, and, due to the large number of states (26 states and one federal district), any standardization of nature and scope of the state policies would be difficult. Moreover, through exchanges with officials from five states, it has been detected that the most important existing state policies are subgroups of the main federal policies.

[21] http://www.unglobalcompact.org/docs/issues_doc/7.5/7.5.2/sebrae_pre.pdf.

Social Service of Industry (SESI). When the programme was launched in 1999, large mining companies in the State of Pará used to purchase only 21 per cent (including services and goods) from local firms. In 2006 this share increased to 46 per cent. The programme has three components: capacity building (entrepreneurs, managers and workforce), certification (thought PROCEM – Enterprise Certification Program) and consulting. The overall competitiveness of companies established in the State is still hampered by the low levels of education of the workforce (less than 5 per cent of the employees have bachelor degrees among the most important local suppliers), so the PDF-PA has a training programme composed of annual courses to meet the demand of the large projects in the mining sector, training 8,700 workers per year.

One of the strengths of PDF-PA is its legitimacy with SMEs and TNCs, since it has ensured the institutional cooperation of FIEPA and it is recognized by the companies as an important mechanism to promote competitiveness and development.

- The Entrepreneurship Program "Empreender" (SEBRAE) was created in 1991 as a result of the partnership between CACB (Brazilian Business and Commercial Association) and SEBRAE. It provides support for business and commercial associations composed by companies from the same core business. With those associations it is possible to contact companies facing similar challenges or problems and find common solutions that would be much more difficult to be solved without information sharing. The programme creates and develops actions to strengthen SMEs in a competitive market environment, and it works in more than 800 municipalities in all Brazilian States with approximately 40,000 participating firms.
- Specific Linkages projects promoted by donors and international organization also exist. One notable example is Projeto Vinculos, in which UNCTAD, GTZ, Fundacao Dom Cabral, Instituto Ethos and SEBRAE have partnered to promote sustainable business linkages. This project will be presented in some detail further below.

5. Business linkages case studies

In order to provide practical insights of successful linkages initiatives, a number of case studies have been selected. Although there is room for improvement, these examples are a good illustration of the quality and potential of the linkages initiatives that exist in Brazil. The main elements presented are the main partners and drivers, the beneficiaries, some cost indicators, as well the impact of these projects in terms of promoting linkages.

5.1. Projeto Vinculos

There are a number of donor / government driven programmes and initiatives aimed at promoting business linkages. Projeto Vinculos is one prominent example. The project was a direct outcome of the UNCTAD XI Conference in São Paulo in 2004, where the Government of Brazil and a number of high-level corporate representatives recognized and endorsed TNC-SME linkages as a vital instrument for strengthening Brazilian enterprises' competitiveness and domestic production capacities.

It is in this spirit that UNCTAD has been implementing Projeto Vinculos in Brazil since 2005 along with the German technical cooperation agency, GTZ, the largest Brazilian SME promotion agency, SEBRAE, a leading Brazilian business school, Dom Cabral Foundation (FDC), and a Brazilian NGO, Instituto Ethos, which specializes in corporate social responsibility.[22] The project aims at creating sustainable business linkages between SMEs and TNCs, thereby improving the competitiveness of local SMEs and contributing to sustainable development in north and north-eastern Brazil. An important pillar of the project is its Advisory Board, inaugurated in November 2007, consisting of leaders of some of the major TNCs in Brazil as well as the Ministry of Development, Industry and Commerce (MDIC). Its aim is to provide strategic guidance to the project and raise awareness among the members' circles of the benefits of strengthening linkages.[23]

Activities

The project operates with an integrated approach, intervening at the company (TNCs and SMEs), the institutional (SEBRAE, SENAI, IEL, SESI etc...), and the government levels. Below, some of the services provided by the project and main partners are outlined:

Company level:

- Managing the processes of SME-TNC match-making;
- Undertaking business health-checks and diagnostics for SMEs with regards to the demands of TNCs;
- Building TNC and SME consortia to elaborate and streamline training of company employees;
- Working with TNCs' supplier / purchase and CSR departments to deliver socially responsible linkages training to their suppliers; and
- Main anchor companies include BASF, Philips, Bosch, Gerdau, Alcoa and Suzanna Chemicals.

Institutional level:

- Upgrading institutions at the State level to deliver linkages-specific training and upgrading services;
- Partnering with the selected business development service providers to align their interventions and services in the area of linkages promotion; and
- Organizing workshops and forums to develop common linkages projects.

[22] The seed funding was provided by the German Ministry of Economic Cooperation and Development (BMZ).

[23] The Vinculos Board members include: Ambassador Rubens Ricupero, Karl P. Sauvant (Columbia University), Rolf Dieter Acker (BASF), Adilson Primo (Siemens), Alexandre Silva (General Electric), Edgar Garbade (Bosch), Elcio de Lucca (SERASA), Elson Valim (FDC), Fernando Ferreira (Telefónica), Ivan Ramalho (MDIC), Luciano Coutinho (BNDES), Marcelo Odebrecht (Odebrecht), Luiz Carlos Barboza (SEBRAE), Mike Pfister (UNCTAD), Ricardo Young (Ethos), Ulrich Krammenschneider (GTZ), Weber Porto (Evonik-Degussa).

Box 6. Corporate Assessment Survey

As part of 'Projeto Vinculos' in Brazil, a corporate survey was undertaken to provide an indication of the profile, constraints and opportunities of SME-TNC linkages. The survey was developed by UNCTAD and carried out by the Dom Cabral Foundation in 2006. It included two parts, one focusing exclusively on TNCs and one on SMEs. The survey was carried out with 149 professionals in the supply chain management and logistics area of TNCs (25 companies) and SMEs (105 companies, 84 of which located in the northeast). The great majority of the TNCs that were analyzed sold their goods and services in the domestic market. Only 13.8 per cent of the sample is primarily involved in export; thus the majority of the lead companies are market-seeking. Consequently, for most of the companies responding to the survey, relationships with suppliers, in general, are based on meeting internal market demands. The main results from the TNC survey read as follows:

- Major benefits of linkages with SMEs: lower costs (cheaper local resources and labour, replacing imported material by locally produced inputs) and increase in flexibility;
- Main challenges for linkages: SMEs need to meet customized and high volume inputs, quality and safety standards, timely delivery, technology and service level;
- Linkages more prevalent in sectors with low entry barriers;
- TNCs' support for SMEs takes place in the form of training rather than financial assistance;
- Good institutional support for SMEs is observed, especially from BNDES and SEBRAE;
- Positive overall business climate, with exception of 'Custo Brasil', rigid labour laws and strong union rights.

The SME survey indicated the following:

- Major benefits of linkages with TNCs: economies of scale, new markets;
- Main challenges for linkages: management capacity and deficit of management training offers, technological constraints and access to finance;
- Most linkages are formed in medium value-added business sectors, only some level of technological development required;
- Most linkages result from company initiatives rather than institutional support;
- Most SME-TNC linkages take the form of medium to long term arrangements, though also one-time-off and short term contracts exist;
- Few SMEs received support from TNCs for technological upgrading;
- Overall business climate perceived as hampering linkages potential (bureaucracy, regulations, start-up time for businesses, etc.).

Source: UNCTAD/FDC (2007).

Government/policy level:

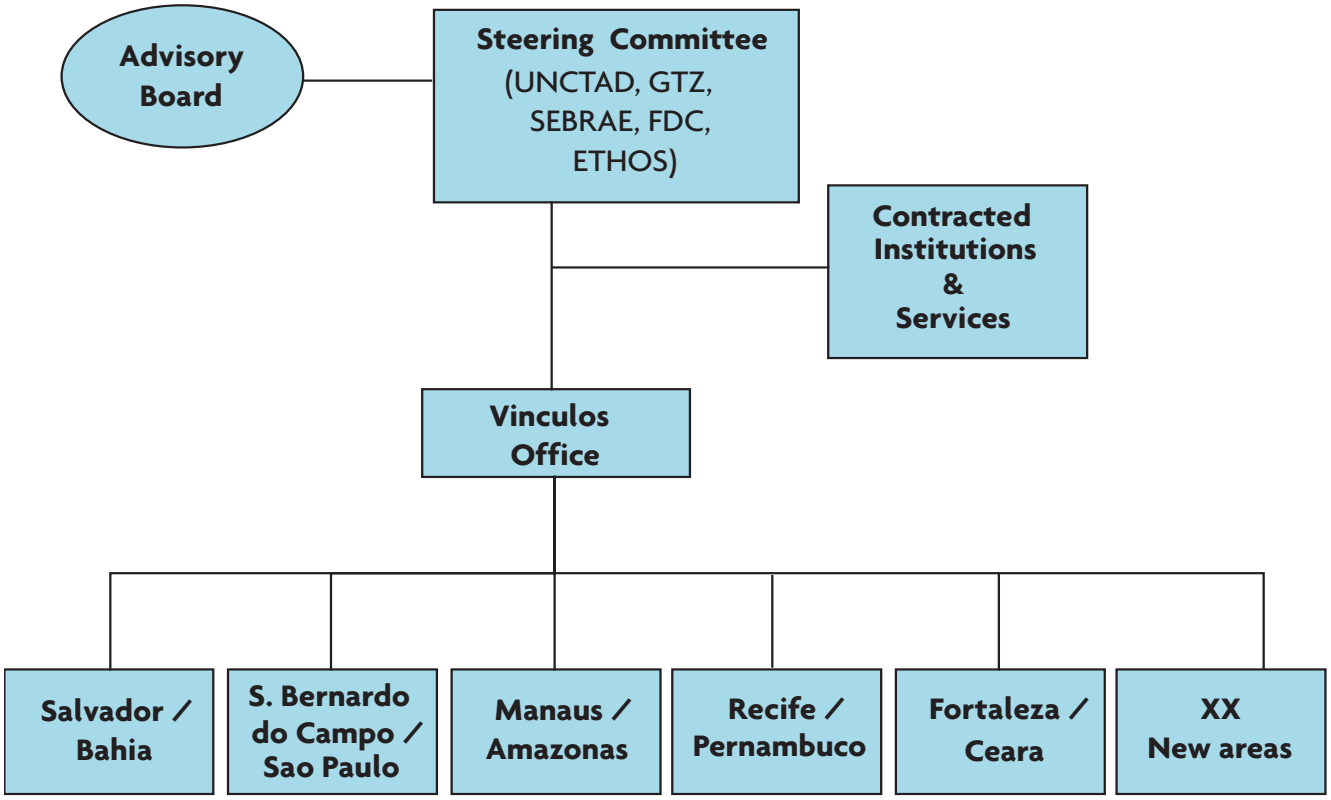
- Providing policy advice through publications and technical studies;
- Disseminating international best practices in the area of linkages policies through workshops and expert meetings on international platforms;
- Aligning linkages and investment promotion with investment promotion agencies; and
- The Ministry of Development, Industry and Commerce (MDIC) is the most important partner on the national level.

The starting point for the conceptualization of the training and upgrading activities, as well as policy development was a technical study and a TNC-SME survey implemented by UNCTAD and FDC. Box 6 highlights the main result of the survey, which serves as the project's main database of linkages promotion policies and programmes in Brazil.

The project's operations are managed by the Vinculos Office based in Fortaleza. All major management and funding decisions are taken by the Steering Committee in cooperation with the Project Director.

The project partners receive advice and orientation from the Advisory Board. Projeto Vinculos is implemented on a regional basis with activities in different areas. In each area, local institutions are trained and used for the project's implementation. Figure 6 is an illustration of the operational set-up of Projeto Vinculos.

Figure 6. Vinculos operational structure[24]



The methodology follows a strict project cycle, applied in every area:

[24] Status March 2008.

1. Feasibility study of linkage subproject (in each area)
2. Partnerships with TNCs and institutions
3. Planning of activities and management structure
4. Mobilization of SMEs showing potential for participating in the project
5. Planning of linkages promotion
6. Project implementation
7. Evaluation & transfer of executive functions to local management

} **Monitoring and planning by Vinculos project office**

The focus of the training is defined with the TNCs and SMEs in the individual States. For example, in Manaus, Amazonas, the project and Philips prepared SMEs for an ISO 14000 certification, a pre-requisite for a supplier contract with a major TNC like Philips.

Also, in the North-eastern State of Pernambuco, the latest survey of the 27 small and medium sized suppliers of the three large transnational corporations (TNCs) (Philips, Gerdau, and Alcoa) that participated in the business linkages programme recorded the following improvements:

- From 31 per cent to 64 per cent on the TNC qualification requirement scale within nine months;
- An increase in the suppliers' sales from R$50.452,16 to R$111.416,03 (average per supplier); thus, more than doubling their average sales figure;
- An increase of 5 per cent in employment among suppliers – from 1027 to 1078 employees.[25]

The technical training has been provided by SME support institutions at the state-level, namely the Brazilian Support Service for Micro and Small Enterprises (SEBRAE), the National Industrial Training Service (SENAI), and the Social Service of Industry (SESI).

The overall success of Projeto Vinculos is significant. By now, some 130 SMEs comprising about 2500 employees participate in its qualification programmes and in most cases it has led to a notably improved business situation. However, not only SMEs but also the participating TNCs have observed the positive impact of the project: they now assume greater responsibility for their local suppliers as

[25] Projeto Vinculos, 2008.

they are recognizing the business benefits of strengthening SMEs, as this in turn strengthens their supplier base. This is reflected by the extension of their own activities in collaboration with the company services providers. BASF, for example, has launched a country-wide programme for the upgrading of its suppliers. To date, the project has enlisted 17 TNCs, illustrated by figure 7 below.

In order to ensure the positive long-term and multiplier effects of the programme, business service providers (including SEBRAE, SENAI, SESI, IEL – the main pillars of Brazil's BDS provision system) have been qualified and can deliver the required training and capacity building to SMEs. This also contributes to improving the coordination among the different linkages promotion activities carried out by the different institutions.

Key elements of project implementation:

- **Forging partnerships with institutions**

Brazil has a vast landscape of SME promotion institutions; with some having active programmes with elements contributing to promoting linkages with TNCs. However, many of the programmes are not well coordinated; some are implemented in parallel to each other, while others may duplicate. At the same time, Brazil has some of the best BDS providers in Latin America. Thus, in order to ensure coherence and cooperation in linkages promotion by these institutions, the project has sought to partner with the key BDS providers in all States where the project is implemented. This on one hand ensures that efforts to promote linkages are coordinated, while on the other hand it transfers the responsibility, knowledge and competence to local BDS providers, thereby ensuring its long-term sustainability. In fact, it is foreseen that the project will be handed over to SEBRAE by 2010. Also, the project involves two leading educational institutions in Brazil, namely Fundacao Dom Cabral and Fundacao Getulio Vargas, providing a link between academia and research. In terms of international cooperation, the project is a prime example of two multilateral and bilateral development cooperation institutions, UNCTAD and GTZ respectively, joining forces to implement technical assistance initiatives; an approach that could be used as a blueprint for other projects and regions.

- **Forging partnerships with lead companies at the early stages of implementation**

To gain methodological relevance and credibility, the project forged a partnership with BASF and Philips in the early stage of implementation. Both companies are known for their strong principles on corporate social responsibility. These successful partnerships generated credibility among businesses. In addition, the identification of a focal point within the TNCs proved to be a key factor of success for the project.

Figure 7. TNCs that participate in Projeto Vinculos

- **Creating a high-level platform for public-private dialogue**

One of the most important elements of the project is the creation of a dialogue between the public and the private sector in the area of linkages promotion. This advocacy role is necessary to sensitize policy makers. The project regularly organizes policy workshops where representatives of government, institutions and companies meet, establish working groups and exchange information on experiences and needs. For example, a policy workshop held in Pernambuco presented how the SME law that was launched in 2007 can affect small businesses, especially with regards to linkages with TNCs. Another important platform for public-private exchange has been the project advisory board, where senior corporate representatives openly exchanged views and strategies for linkages promotion with government officials. These initiatives contributed to raising the awareness of the importance of strengthening linkages in SME promotion initiatives.

- **International exposure**

The project and its partners offer the beneficiaries ample opportunities for international exposure and exchange of views and experiences. For example, UNCTAD regularly invites project partners to international expert meetings in Geneva where the project director and beneficiaries have the opportunity to present their result and receive feedback from international stakeholders. These events also offer a good opportunity for the project to gain visibility. For example, the project was presented by SEBRAE and discussed at the UNCTAD XII Conference (2008, Accra, Ghana) with prominent government and corporate leaders. In addition, large companies find it useful to exchange views and experiences with other companies within the framework of an international initiative. The project and its exposure offer them opportunities for networking and creating innovative partnerships, at times even with competitors.

5.2. BASF and the Vinculos model[26]

BASF, a major German chemical company, has been established in Brazil for almost a century. It has a portfolio of 8,000 products ranging from chemicals, plastics, performance products, agricultural products and fine chemicals from oil and natural gas. In Brazil, BASF has a very strong R&D component through which it launches new technologies and has large production units catering to the domestic, regional and global markets. Its profile, matched with its strong corporate philosophy regarding social and environmental sustainability motivated UNCTAD and GTZ to strike a partnership with BASF through Projeto Vinculos in 2005.

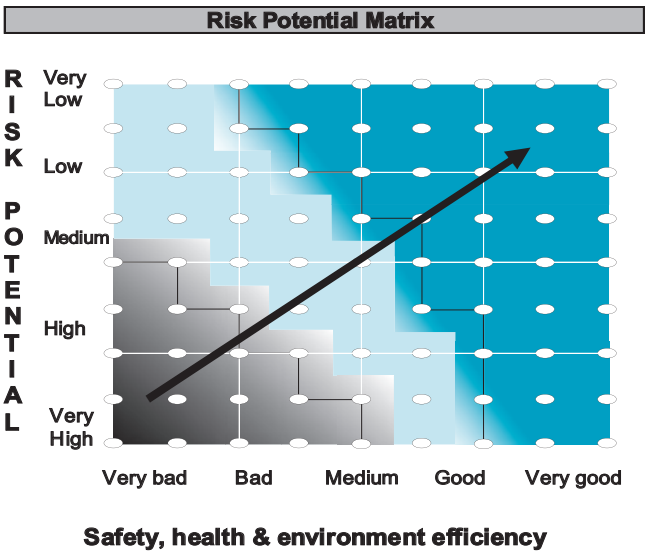
The aim of the initiative was to upgrade selected small and medium sized suppliers to become strategic partners of BASF. After two years, the initiative scored the following results:

- Four SMEs (BASF tollers[27]) were upgraded to strategic partners; and

- BASF incorporated the Vinculos methodology into a nationwide programme coined "BASF value chain development program".

Activities:

BASF has a system of Evaluation and Qualification for suppliers aimed at evaluating the performance of each supplier to guarantee that the BASF product requirements are completely met. The qualification system aims at improving the suppliers in delivering products in line with stringent



profitability, quality and commitment to the environment, safety and health standards. It includes a classification of all the suppliers, SMEs and larger companies, according to the following risk matrix:

The project urged the BASF Corporate Logistic Service and Supply Chain team to pay special attention to the SME suppliers, referred to as tollers. It was agreed to promote the latter to become strategic partners of BASF, provided they were successfully upgraded to meet the requirements and standards.

After an initial diagnosis, four tollers were selected. They work with a total of 46 sub-contractors; therefore,

[26] Information gathered from interviews with BASF Brazil during the duration of Projeto Vinculos, between 2006-2008.

[27] BASF refers to the SMEs that it is upgraded as tollers.

Companies	Company 1		Company 2		Company 3		Company 4	
Year	2005	2007	2005	2007	2005	2007	2005	2007
Organization								
Product Management								
Transport and Distribution								
Employee Health and Safety								
Process Safety								
Environmental Perfection								
Readiness and Emergency Assistance								
Communication								
SMA performanace								

not qualified; acceptable; fully qualified according to BASF standards.

upgrading the first tier has strong implications for the whole supply chain.

The training was designed and carried out by Projeto Vinculos, which undertook an initial diagnosis in the legal, process safety, environment, work safety areas. After the 80-hours training, the feedback from the participants indicated that Vinculos generated synergy among the participants - in fact, today, three of companies regularly exchange on problems they encounter and on ways to overcome them.

By the end of 2007 an audit was undertaken manifesting that after the first phase of the Vinculos initiative, all strategic suppliers have shown an overall improvement in terms of the safety, health and environment (SHE) standards. The table below summarizes the outcome of the audit.

Key elements of project implementation:

- **Identifying a focal point within BASF**

In the early stages of negotiations with BASF, Projeto Vinculos took the initiative of nominating a focal point for the project within the company. This turned out to be a key factor of success, as the person was motivated to drive the process within the company. Through the project, the focal point was able to gain recognition within the company for his contacts with international development partners, as well as improving the company's image by investing in SME training. When facing administrative bottlenecks, or difficulties with certain departments due to time and delivery pressures, the focal point proved vital in securing the project implementation. In addition, he was able to fine-tune the methodology to ensure the project meets the business development expectations of the company.

- **Project link with the supply chain department**

There are various avenues for a linkages project to partner with a company. Most TNCs have a supplier development programme, while some also have fairly well-developed and structured CSR departments. The project therefore needed to define specific and well defined targets of potential interest to the TNCs. Since the focus of Projeto Vinculos is on business development within SMEs, cooperation should sought and be established with the relevant departments responsible for the supply chain management and purchasing.

Within BASF, the cooperation between Projeto Vinculos and the Corporate Procurement team ensured the launching of new initiatives adding value in terms of operational benefits for the TNC and upgrading SMEs. The pilot project forged clear indicators and measurable objectives, and generated outputs.

- **Selection of corporate partners**

Although a programme aiming at strengthening the linkages between a TNC and its suppliers and potential suppliers makes good business sense, successful implementation depends very much on the corporate partners. With regards to the TNCs, the company should have a strong CSR policy or a manifested commitment to supplier upgrading, a commitment that stems from the top hierarchy in the company subsidiary. Similar criteria must be applied to the SMEs that partner up in a linkages project. These have to be committed to the project and its goal, and have to stand ready to invest time and financial resources to be upgraded.

5.3. BOSCH – a global integrator in Brazil[28]

BOSCH is one of Projeto Vinculos' partner companies and serves as a benchmark for some of the project's SME upgrading and training activities. The project uses the BOSCH experience to develop its training contents. In fact, the company assists in the implementation of business linkages elements in Bahia. The company has proven to have developed a highly successful and cost efficient method of upgrading its suppliers; a methodology that was presented to other TNCs and SMEs during various networking events promoted by the project.

The German automotive technology giant first established itself in Brazil in Campinas, in the State of São Paulo, in 1954. The company's original motive was to cater the local market and to set foot in the growing automobile industry in Brazil. The southern States of São Paulo, Paraná, Santa Catarina, Rio Grande do Sul, as well as Minas Gerais and Rio de Janeiro, were the most attractive locations for foreign car makers, due to powerful fiscal incentives and a good industrial environment. At these early stages of operation, BOSCH hardly outsourced production and services, concentrating on in-house production. Since then, the company's outsourcing has expanded remarkably.

Its drive towards expanding its linkages with suppliers was spurred by two major factors. Firstly, as seen earlier, the Brazilian government issued policies aimed at strengthening the domestic economy. These included import substitution measures, as well as local content requirements for foreign companies.[29] Secondly, logistics were such that it was very difficult to predict timely shipment of inputs for production, due to, among others, infrastructure deficits in Brazil and distance from Europe.

Today, Bosch works with a large number of local suppliers, particularly in manufacturing. The products

[28] The company specific information presented here was gathered from site-visits in Campinas and interviews with Mr. Cid Lopez, Robert Bosch Latin America Supplier Development Director.

[29] Some of these measures would no longer be acceptable under WTO regulations.

sourced outside the company include components and raw material for power tools, fuel injectors, plastic coils, fuel pumps, cooling systems, starters, generators, brakes, wiper systems, diesel pumps, diesel common rail systems, spark plugs and others. However, a number of services, beyond basic services, are also outsourced. Examples include marketing and advertising, consumer relations, call centres, and IT services.

In terms of a linkages strategy, the company concentrates on a limited number of strategic partners, however expanding the volume of products and services purchased locally. In order to maintain its competitive position in the world market, Bosch recognized that it can only grow together with its partners and suppliers. With a local strong supply base, Bosch's operations in Brazil will be more competitive.

In that light, the company's management launched the "Fit For Global Approach" (FFGA) Supplier Development Program in 2003, with the aim to integrate the profit and cost-reduction targets, while acting socially responsible besides promoting national suppliers to potentials global players. The main slogan heading the program is "Business Purpose, Impact on Society, Impact on Customers, Corporate Solidarity". The total investment for the period 2003-2008 is estimated to be of the magnitude of 18 Million Brazilian Reais. By 2007, the following results were achieved:

- 19 suppliers have reached the Bosch preferred supplier status for Latin America;
- 7 suppliers have become worldwide Bosch preferred suppliers;
- 2 suppliers have become direct exporters, exporting goods and services worth U$1.5 million per year;
- The FFGA program concept is now being applied by Bosch in China; and
- Cost reduction improving the supplier productivity and competitiveness.

The Bosch Business Units have defined internal criteria for supplier selection, which include the potential to export, to supply new products, flexibility, quality and the ability to produce the required volumes.

Participation in the basic FFGA program based on Bosch Production System (BPS – Lean Manufacturing Philosophy) is restricted to 33 strategic suppliers while a compact FFGA was designed for further 22 partners. It is to note that these suppliers produce more than 50 per cent of the total financial volume purchased by Bosch in Latin America.

After a full-round diagnostic of the selected suppliers, it was evident that most of them showed the following characteristics:

- Technically capable and flexible;
- Good in "turning off fires" rather than preventing them;
- Receptive and open to change processes, but weak in implementation or restructuring and changes;
- Unstable quality and delivery below the global average for Bosch suppliers;
- Training, change management and development of management competence were not a priority;
- No waste elimination culture.

The Bosch team then categorized the typology of suppliers into three groups, illustrated in figure 8 below. It is obvious that, despite their strong potential, most suppliers are in group 3, exhibiting no clearly defined division of tasks, short-term vision, autocratic management styles, and no human resource policy. The long-term aim of the FFGA program is to promote most of group 3 suppliers to group 1 status, which would then fulfil all the criteria in terms of support area, strategy, leadership and human resource policy.

The suppliers upgrading should be achieved through training program (theory) and practical projects, focused on:

- Improving and stabilizing OTD, PLKZ and PPM indicators according to global standards;[30]
- Knowledge and experiences spread and shared throughout the company;
- Moving supplier to establish human resource policy aiming at workers' development;
- Team projects applying the Lean Manufacturing tools at Gemba (shop floor);
- New management mindset focused on waste elimination and value-added concepts, through the introduction of the lean production philosophy; lean tools as value stream mapping, 5S, supply chain, lean accounting, etc.;
- Quality and prevention tools;
- Ergonomics and work standardization;
- Human resource administration.

Although the trend is focused on a selected number of strategic partners, the impacts on the rest of the supply chain are crucial. Bosch's direct suppliers have to enforce Bosch's global standards also in managing their own suppliers (so the suppliers of the suppliers), thus rendering the whole chain more competitive.

Key elements of project implementation

- Rigorous and well-defined supplier selection criteria

BOSCH's careful supplier selection ensures commitment and drive for operational excellence from the suppliers. Established criteria such as the potential to export also warrant that some operational responsibility is shared with the suppliers, who have an intrinsic motivation to meet or exceed their potential. Also, the fact that the number of strategic partners / suppliers is limited allows BOSCH to duly focus on their development and monitor their progress.

- Thorough diagnostic

[30] OTD – On Time Delivery; PLKZ – failures along the value stream (Bosch and customers including zero KM and guarantee), 0 being a perfect score, PPM – Parts per Million, indicator of how many parts per million supplied are defective.

Figure 8. Bosch's supplier typology

Characteristics	Group 1	Group 2	Group 3
Support areas	Well defined, and technically capable	Few areas with different functions	No clear definition about responsibilities
Strategy	Medium and long term, shared with the organization	Medium and long term not shared	Short term, focus in "turning off fires"
Command/Leadership Style	Democratic	Autocratic (owners "strong hands")	Auocratic, family ties
Human Resources	Well structured, focus in developing managers abilities	Structured, focus on technical training	Pure back office

Source: Adapted from Cid Lopez, BOSCH, São Paulo, 5 November 2007.

The business diagnostic undertaken by BOSCH on its suppliers allows it to develop a clear typology of the companies, as illustrated above. This is crucial in identifying the bottlenecks and short-comings of the suppliers, which is then used to conceptualize targeted training and upgrading measures. Without such a diagnostic at the early stages of implementation, some training measures would naturally be obsolete with limited effects, despite large investments.

- Profitability

The main motive for upgrading suppliers is competitiveness, which inevitably includes profitability. The suppliers incurred no costs by participating in the FFGA programme; on the contrary, both Bosch and the suppliers have recorded substantial cost-reduction figures due to FFGA. A profitable corporate initiative fosters sustainability, offering options for further investments in supplier development.

The BOSCH approach has been selected by Projeto Vinculos and was shared with all Vinculos corporate lead partners. In terms of multiplying this concept to the rest of Brazil, Projeto Vinculos and Bosch are implementing elements of the programme through the initiative in Bahia. After having proven to be a highly successful supplier development concept, the FFGA program is now being applied by Bosch in China. Projeto Vinculos aims at using the experiences of BOSCH, especially in terms of motivating other partner TNCs to consider developing local suppliers.

6. Lessons learned and recommendations

Brazil has long been a leading destination for FDI among developing countries. Brazil's large internal market continues to be the main determinant of FDI attraction and foreign affiliates had a positive impact on capital inflows, investment and production in a variety of industries. Linkages with domestic suppliers, however, are limited and FDI has not contributed to spur exports and shift production towards more technology intensive products. Also FDI remains heavily concentrated in the southeast and other areas of the country do not benefit of FDI as a source of economic development and modernization, income growth and employment.

There are four *strategic issues* that Brazil could address to enhance the benefits of FDI through business linkages:

- **Develop a coherent policy framework for business linkages**

There are a number of successful SME support programmes (SEBRAEtec, LPAs, etc.), however Brazil lacks a comprehensive approach for the creation of business linkages. Competitiveness policies for SMEs should include linkages components on the federal as well as on the State level. Business linkages programmes should become a vehicle for integrating many of the measures geared towards increasing the development impact of FDI, which should include:

- Information and match-making;
- Programmes aimed at upgrading domestic supplier's technological capability;
- Promotion of the establishment of supplier associations;
- Training; and
- Enhancement of suppliers' access to finance.

The most important factor in business linkages development is the capacity of local SMEs to meet the necessary standards, supply reliably and upgrade technologically. Brazil has numerous programmes and initiatives in the area of SME support, including entrepreneurship programmes through SEBRAE, SENAI's technical training, and BNDES' financing schemes. However, research and feedback from TNCs have highlighted that the management deficiencies on the part of the Brazilian SMEs are one the most important obstacles towards creating more sustainable linkages. Recognizing the mutual benefits that linkages can provide, TNCs can contribute to set up supplier development programmes that take into account the required technology and know how and the managerial competencies, mindset and attitude required to develop linkages. As demonstrated by Projeto Vinculos, co-financing schemes including the TNCs, the Government and SMEs

can be used to build such programmes. Partnerships with corporations can be also developed and incorporated within the growing corporate social responsibility programmes which often include efforts to foster linkages with local producers. The establishment of a Business Linkages Council composed of TNCs, SMEs, Government and support institutions can facilitate joint actions. Projeto Vinculos, for instance, has successfully established business linkages councils at the State level and this model can be easily replicated.

In addition, Brazil has many policies and programmes that contain elements contributing directly or indirectly to linkages promotion. Therefore, these elements should be analyzed in more detail and the linkages component strengthened to achieve the policy objectives. For example, the promotion of infrastructure in the area around the SUAPE port in Pernambuco contains numerous opportunities for strengthening inter-firm cooperation and SME-TNC linkages. The innovation law launched in 2006 and the SME law (Super Simples) launched in 2007 present opportunities to promote linkages, especially technology-intensive linkages.

- **FDI targeting**

Targeting is required to attract FDI that is more beneficial to the development of business linkages. Up to now, Brazil does not have a comprehensive targeting approach at the federal level. For example, the Industrial, Technology and Trade policy identifies four strategic industries and suggests that FDI will be actively sought in these areas. All four industries – capital goods (machinery and equipment), information technology (semiconductors, etc), pharmaceuticals and software – are innovation based and knowledge-intensive, and thus fulfil all or at least some of the following criteria:

- Dynamic development;
- Significant shares of international investment in R&D;
- Potential for opening new business opportunities;
- Direct link to innovation of processes, products and uses;
- Contribution to the strengthening of production chains;
- Importance for the future of the country and potential for the development of dynamic competitive advantage.

These objectives need to be integrated into a research-based FDI targeting exercise. The analysis should take into account TNC strategies, the country's potential as an investment location and conditions offered by alternative sites. In addition, the selection of TNCs should be based on the technology that can be transferred to local suppliers. Valuable experience can be drawn from the BOSCH and BASF suppliers upgrading programme adopted within Projeto Vinculos.

- **Improving the Federal-State relationship in FDI and linkages matters**

Brazil has not benefited optimally from intense competition among the regions for specific investment projects. This also has implications for investment promotion policies, as these efforts need to be more closely coordinated at the federal level. The federal promotion agency should be strongly mandated and equipped to lead and coordinate investment generation activities especially where these involve marketing the country to new investors. The brief of the agency should also include policy advocacy and image building. The federal agency should coordinate and support the promotion efforts of the State agencies and should be a focal point for training of State agency personnel. The investment promotion system should ensure that all States are equipped to present, and have the fair access to, opportunities to bid for foreign investment seeking to locate in Brazil. The States' attractions to investors should be properly presented and add to the overall profile of the nation as an attractive location for FDI. Part of the presentation should include information on local partners and potential suppliers to investors. Special support should be given to poorer States that have less well-equipped agencies and, in many respects, a more difficult task in attracting investors. Brazil must develop protocols of cooperation among Federal and State investment promotion agencies.

Also, the existing industrial cluster initiatives currently in place could be used as an avenue for improving Federal-State relationships. In this light, as linkages between domestic and foreign affiliates occur more frequently when both are located in the same spatial and industrial area, the numerous efforts in Brazil to build up such clusters would have also to be coordinated with the linkages programmes.

- **Internationalization of Brazilian companies**

The internationalization of Brazilian companies has surged in recent years, creating additional potential for SME-TNC linkage creation. In fact Brazilian companies have shifted from exports to different forms of foreign investments with a reconfiguration of their value chain to meet increasing domestic and global competition. It has introduced new managerial challenges for companies that have to develop their business models and strengthen their suppliers to compete internationally. For example, Embraer – a large Brazilian aircrafts manufacturer – has benefited from the federal government support programmes to strengthen the local supply chain. In order to develop business linkages in Brazil, the target of policy measures and programmes should also include vibrant and dynamic Brazilian firms that are exporting and becoming global players.

Abbreviations

ABRAZPE	Brazilian Association of Export Processing Zones
AFPR	Paraná Promotion Agency
AIAB	Brazilian Aerospace Industries Association
ANAC	National Civil Aviation Agency
ANPROTE	Association of Business Incubators
BDS	Business Development Service
BID	Inter-American Development Bank
BITs	Bilateral Investment Treaties
BNDES	National Bank for Social and Economic Development
CACB	Brazilian Business and Commercial Association
CARICOM	Caribbean Community
CNI	National Industry Federation
CPII	The Columbia Program on International Investment
CSR	Corporate Social Responsibility
FAMPE	Guarantee Fund for Small and Medium Enterprises
FDA	Amazon Development Fund
FDC	Dom Cabral Foundation
FDI	Foreign Direct Investment
FDNE	Northeast Development Fund
FFGA	Fit For Global Approach
FGPC	Competitiveness Promotion Guarantee Fund
FIESP	São Paulo Federation of Industry
FND	National Development Fund
FNE	Constitutional Fund for Northeast Financing
FUMIN	Multilateral Investment Fund
GDP	Gross Domestic Product
ICMS	Tax on Circulation of Goods and Services
INDG	Institute for Managerial Development
INDI	Industrial Development Institute of Minas Gerais
LPA	Local Productive Arrangements
M&A	Mergers and Acquisitions
MDIC	Ministry of Development, Trade and Industry
MDS	Ministry of Social Development and Fight against Hunger
MERCOSUR	Common Market of the South
MIP	Manaus Industrial Pole
MRE	Ministry of Foreign Affairs
MSME	Micro, small and medium enterprise
NAFTA	North American Free Trade Agreement
NGO	Non-governmental Organisation
OTD	On time delivery
PAC	Growth Acceleration Program
PEIEx	Program of Industrial Export Expansion
PITCE	Industrial, Technological and Foreign Trade Policy
PLKZ	Indicator of problems in production (zero representing a perfect score)
PPM	Parts per Million
PPP	Public Private Partnership
RENAI	National Network of Investment Agencies
SEBRAE	Brazilian Support Service for Micro and Small Enterprises
SENAC	National Service for Commercial Training
SENAI	National Service for Industrial Learning
SENAR	National Service of Rural Training
SENAT	National Service of Transportation Training
SESC	Social Service of Commerce
SESI	Social Service of Industry
SEST	Social Service of Transport
SIPRI	Integrated System for Investment Promotion and Technology Transfer
SME	Small and medium enterprise
SUDENE	Superintendence for Northeast Development
SUFRAMA	Superintendence of the Manaus Free Trade Zone
TIN	Information and Business Telecenters
TNC	Transnational Corporation
USD	United States Dollar
VAT	Value added tax
WAIPA	World Association of Investment Promotion Agencies

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Chapter III

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN INDIA[31]

1. Introduction

The Indian economy has undergone tremendous change since gaining independence from the United Kingdom in 1947. For more than 40 years the economy was centrally planned and characterized by pervasive government control on commodity prices, industrial investment, import and export flows, and foreign exchange rates. Not until the early 1990s did the Indian Government opt for a long-term liberalization process, and gradually opened its markets to international trade and foreign direct investment (FDI).

Since 1991, India has experienced an unprecedented rate of economic growth, fuelled by the emergence of key industrial sectors, such as the information technology (IT), pharmaceutical and automotive sectors. Firms in these industries have been able to take advantage of India's unique combination of highly skilled work force and low labour costs, crucial factors for attracting efficiency-seeking FDI and forging sound business partnerships with domestic enterprises.

The Government of India hopes to continue this upward trend by quadrupling its real per capita income by 2020. Its vision places heavy emphasis on human resources development and job creation, particularly in the development of small and medium-sized enterprises (SMEs), agro-industries and IT services. By 2020, India also hopes to become an information society and a knowledge economy by, inter alia, doubling the share of expenditure on education, increasing the national expenditure on R&D activities, and investing in communication infrastructures.

This chapter identifies the key factors that have generated business linkages in India, and their impact on entrepreneurship and enterprise development. Two case studies are presented on auto parts manufacturing and the IT sector. Based on the findings of the case studies, it concludes with lessons learned from a policy perspective. The active role of the Indian Government will be underscored, paying special attention to its strong commitment to promoting cluster development programmes, which proved to be instrumental in enhancing industrial development, employment and GDP growth.

2. Economic backdrop

Since 2004 India has emerged as one of the fastest growing market economies, second only to China. Its GDP grew at an annual rate of more than 8 per cent, compared to around 6 per cent in the 1980s and 1990s, and to 3.5 per cent during the three decades before 1980, when highly interventionist policies put heavy constraints on the growth of the economy (see Table 1). India seems to be reaping the benefits of reforms introduced in the early 1990s when barriers to trade were massively lowered and capital markets liberalized, and total trade in goods and services reached 45 per cent of the GDP in 2007, up from 17 per cent in 1990 (IMF, 2007). The economy is broad-based, with well-developed agriculture, industrial and service sectors, including high technology and knowledge-based sectors.

Table 1. India: Macroeconomic trends, 1980-2009 *(in per cent per year)*

Five-year Plans	6th	7th		8th	9th	10th						
	1980-1985	1985-1990	1990-1992	1992-1997	1997-2002	2002	2003	2004	2005	2006	2007	2008	2009
GDP growth	5.1	6.1	6.0	5.5	5.4	4.6	6.9	7.9	9.1	9.7	9.2	7.9*	8.0*
Inflation	10.5	7.7	9.0	10.3	7.1	4.3	3.8	3.8	4.2	6.2	6.4	5.2*	4.0*
Current Account Balance (as a % of GDP)	-1.5	-2.1	-2.5	-1.2	-0.8	1.4	1.5	0.1	-1.3	-1.1	-1.8	-3.1*	-3.4*

* IMF projections.
Source: International Monetary Fund, World Economic Outlook Database, April.

[31] This chapter is based on a report prepared for UNCTAD by Dr. Sailendra Narain, Chairman, Centre for SME Growth and Development Finance (CESMED), India.

Table 2. Sectoral composition of GDP, 1980-2006 *(as a percentage of GDP)*

	1980s	1990s	2001	2002	2003	2004	2005	2006
Agriculture	31.99	27.64	23.19	20.87	20.93	18.79	18.30	17.53
Industry	25.93	26.44	25.31	26.42	26.20	27.46	27.63	27.89
Service	42.08	45.92	51.50	52.71	52.87	53.75	54.06	54.58

Source: The World Bank Group – World Development Indicators.

Real trade growth stood at 11.5 per cent in 2007, with imports growing faster than exports in recent years, reflecting the growing demand of India's booming economy, especially in energy and infrastructure. The country's 2007 share of trade in GDP is 45.2 per cent, a substantial increase over its late 1990s average (24.9 per cent) and comparable to other large emerging economies such as China, Russia, and Mexico. India's exports are growing, but that growth is dominated by growth in service exports and in particular IT-related services. Overall, the services sector's share in total exports is a high 36.7 percent, as the country has become a major exporter of professional services.

India's investment in education and human development is already paying off, particularly in the services industry. Since 1993, India's total-factor productivity (TFP) in the services sector has grown from 3 to 9 per cent, the fastest service sector TFP growth in the world. The success of the service, including information technology and software development, has changed the industrial structure of the Indian economy. As shown in table 2, the share of the agriculture sector in GDP decreased from 32 per cent in 1980s to 27.7 per cent in 1990s, while that of a thriving service sector has increased from 42.1 per cent in the 1980s to over 50 per cent between 2000 and 2006 (World Bank, 2007).

Despite India's impressive economic growth, a large proportion of India's population still lives below the poverty line, earning less than US$ 1 a day. While this discrepancy is startling, the gap is indeed narrowing (Chen and Ravallion, 2004). Such positive trend is expected to continue as more jobs are being created by the expansion of existing firms and the rapid formation of new start-ups. It should be noted though that India's political and administrative system is founded on a federal structure composed of 28 States, each with its own governor, policy and rule of law. Since investment priorities and industrial development measures are formulated at the State level, Indian States have shown unequal trends and different levels of economic achievements.

A common denominator of most States has been the rise of SMEs, which has represented a major contributing factor to narrowing the income gap. In 2004-2005, SMEs contributed to around 39 per cent of the country's manufacturing output and 34 per cent of its exports (Government of India, Ministry of Finance, 2007).

Furthermore, it is estimated that SMEs in India account for almost 90 per cent of industrial units and 40 per cent of value addition in manufacturing (Dun & Bradstreet, 2007). A recent government economic survey shows that SMEs provide employment to about 29.5 million people in the rural and urban areas of the country (Table 3). According to the Indian Ministry of Finance, the "process of economic liberalization and market reforms, while exposing the Indian SMEs to increasing levels of domestic and global competition, has also opened attractive possibilities of access to larger markets and of stronger and deeper linkages of SMEs with larger enterprise" (Government of India, 2007).

3. Recent FDI trends

India has experienced a steady increase in FDI over the past decade. In particular, in 2006, FDI inflows to the country soared by 153 per cent to US$ 17 billion, an amount equivalent to the total of all inflows during the previous 3-year period (Table 4) (UNCTAD, 2007).

Until 2006, the level of FDI inflows to India was lower than that of other developing economies, including China, Hong Kong (China) and Singapore (Table 4). However, strong economic growth and further FDI liberalization of industrial sectors, such as the telecommunications, construction and retail sectors is expected to increase FDI substantially.

Historically, FDI into India has been dominated by Mauritius, followed by the United States and Japan. Investments from these three countries accounted for nearly 50 per cent of India's FDI in the biennium 2005-2006. The majority of these investments have been concentrated in five high-growth states/regions, namely Delhi, Maharastra, Tamil Nadu, Karnataka and Andhra Pradesh. Together, these States attracted over 60 per cent of the country's FDI

Table 3. Performance of the Indian SME sector, 2002-2006

Year	Number of units (in millions)				Production Growth		Exports	Employment
	Reg'd	Unreg'd	Total	Growth (%)	Current prices (%)	Constant prices (%)	(Rs. Trillions)	(in millions)
2002-03	1.59	9.36	10.95	4.1	10.5	7.7	0.86	26.0
2003-04	1.69	9.7	11.39	4.1	14.7	8.6	0.976	27.1
2004-05	1.75	10.1	11.85	4.1	16.9	10.0	1.24	28.2
2005-06	1.87	10.47	12.34	4.1	13.9	10.4	N/A	29.5

Source: Government of India Economic Survey 2006-2007, Development Commissioner (SSI).

Table 4. FDI in India and in Selected Developing Economies *(in US$ millions)*

Country name	FDI inflows				FDI Stock
	Average (1986-1990)	Average (1991-1995)	Average (1996-2000)	Average (2001-2006)	2006
China	2'926.1	22'835.2	42'695.8	59'271.6	292'559.0
India	182.0	796.8	2'906.0	7'458.3	50'680.0
Indonesia	598.6	2'341.8	843.2	2'059.8	19'055.9
Malaysia	1'182.0	5'063.6	4'803.4	3'479.9	53'574.6
Singapore	3'332.5	6'372.6	12'762.2	15'587.3	210'089.0
Thailand	1'226.8	1'889.2	4'630.4	6'366.8	68'057.7
Viet Nam	40.4	1'100.1	1'772.6	1'649.4	33'451.3
ASEAN countries	6'978.8	18'299.9	27'875.6	31'824.3	420'025.0
South, East and South-East Asia	15'758.5	49'832.2	107'546.8	136'241.8	1'684'345.7
Developing economies	26'776.0	78'047.5	202'361.6	255'575.0	3'155'855.6

(Ministry of Finance, 2006-2007 Union Budget and Economic Survey). Over the years, European investments have been concentrated in the intermediate goods, machinery and equipment sectors, while the United States has focused more on financial services and IT.

Economic reforms have not only led to a booming of FDI, but also dramatically changed the sector and industry-wise composition of FDI. Available data on inward FDI stocks for specific sectors and industries reveal a tremendous shift from FDI in the primary and the manufacturing sectors to FDI in services since the mid-1990s (Chakraborty and Nunnenkamp, 2006). The three main sectors, which account for over 40 per cent of the entire pool of FDI into the country, are electrical equipment, services and telecommunications (Table 5). A large portion of the FDI has flowed into the skill-intensive and high value-added services industries, particularly financial services and information technology. India, in fact, dominates the global IT industry in terms of attracting FDI thanks to its unassailable mix of low costs, excellent technical and language skills, know how in distribution and supportive government policies.

The liberalization of government policies and relaxation of regulations of FDI abroad have also contributed to the rise of Indian investment abroad. The number of outward approvals, as well as the size of outflows has increased significantly in the past decade. Indian outward investment totalled US$ 9.7 billion in 2006 – an amount that has grown very fast from the low US$ 600 million in 1996. OFDI from India has not been entirely led by large enterprises. Indian OFDI by SMEs has been growing since the 1990s, a trend that is relevant in both the manufacturing and the software industries. India has become an important source of FDI to the South Asian region and other countries. The growing competitiveness of Indian firms and their increasing desire to venture abroad to expand markets, operate near to clients and acquire technology and brand names are key drivers pushing more Indian firms to invest abroad. The main targets of recent Indian investment abroad are the developed countries.

A survey conducted by the Indo-American Chamber of Commerce in 2003 reveals that 220 Fortune 500 companies are present in India (IBEF, 2005)[32]. The survey revealed that a very efficient and independent judiciary system increased TNC confidence and sense of security when investing in India, while English as a working language allowed

[32] These include, among others: BASF, Canon, Cisco, Citi Group, Coca Cola, Ford, General Motors, Honeywell, Intel, Johnson & Johnson, Microsoft, Nestlé, Novartis, Philips, Samsung, Siemens, Volvo and Whirlpool.

Table 5. FDI inflows by sector, 2005-2006

	2005 -2006	2006-07 (April - Sept)	Cumulative Inflows FDI (Aug 1991 - Sept 2006)	Shares of Inflows (percent)
	millions US$			
Electrical Equipments	1451	778	6272	17.54 per cent
Service Sector	581	1509	4600	12.69 per cent
Telecommunications	680	405	3776	10.39 per cent
Transportation Industry	222	259	3436	9.31 per cent
Fuels	94	138	2720	7.45 per cent
Chemicals	447	95	2238	5.49 per cent
Food Processing Industries	42	33	1212	3.12 per cent
Drugs and Pharmaceuticals	172	48	1055	2.91 per cent
Metallurgical Industries	153	111	766	2.14 per cent
Cement and Gypsum Products	452	21	768	2.14 per cent

Source: Economic Survey, 2006-2007, Ministry of Finance, Government of India.

them to develop a reliable and forward-looking strategy for outsourcing a wide range of services to the country. Surveyed TNCs revealed that the key reasons for locating to India included: democratic governance; rapid economic growth; large domestic market with increasing purchasing power; availability of highly-skilled human resources; and an enabling environment.

4. The Policy Framework

For over four decades (1950-1991), India followed development policies based on public ownership of commercial assets, a complex industrial licensing system and an extensive regulation on financial intermediation. Consequently, the country was rather isolated from the economic development of the rest of the world, and India's share of world trade declined from 2 per cent in the 1950s to 0.5 per cent in the late 1980s. In 1990, the surge in oil prices imposed a severe strain on the Indian balance of payments. By June 1991, the country was on the verge of defaulting on its external debt obligations with reserves at less that US$ 1 billion, an amount equal to two weeks of imports. The government responded to the crisis by introducing stabilization and gradual trade liberalization reform measures, intended to not only correct the macroeconomic policies of the 1980s, but also to address the long-standing constraints of economic growth (Ahluwalia, 2002).

The Government of India embarked in the liberalization process in 1991. The Industrial Policy Statement of 1991, outlined the goals stating that while the government would continue to follow the policy of self-reliance, there would be greater emphasis on trade liberalization. However, the government also expressed its commitment to the development and use of indigenous capabilities in technology and manufacturing. Industrial policy since 1991 has aimed integrate India into the world economy by opening the country to selective FDI and reducing regulatory controls on industry. India welcomed FDI and technology collaboration. FDI was considered particularly important for the development of infrastructure energy, telecommunication services and software development. Besides investment from foreign companies, the government also welcomed investment from non-resident Indians. In some sector, such as civil aviation, they are permitted higher holdings than other foreign investors. Such reforms included:

- Free entry of foreign capital in most sectors of up to 100 per cent of share capital. A short negative list was established;
- Automatic clearance for capital goods import;
- Automatic approval of foreign technology agreements in high priority areas;
- The creation of the Foreign Investment Promotion Board (FIPB) for speedy approval of FDI;
- Permission for private sector banking.

4.1. Improving the business and investment climate

The Government of India has initiated substantial improvement of the investment climate, adopting reforms that have worked particularly well in specific areas.

- *A stable macro-economic framework* is imperative to reduce the risks faced by investors. This relates to the quality, predictability and consistency of fiscal and monetary policies. The Government of India is targeting a central government deficit of 3.3 per cent in 2008 to be achieved through tax reforms, higher revenues and expenditure reforms that include reducing subsidies and curtailing government spending. A series of financial sector reforms and the liberalization of foreign exchange regulations have been introduced. India's exchange-rate regime has been determined by the market since 1993. Most notably the liberalization of the current account and the full convertibility of the Rupee were adopted in 1994 (Kumar, N. 2003). Additionally, in 1994 the Indian capital market was opened to foreign investors, who have since been allowed to freely invest in all types of securities traded on the primary and secondary market with full repatriation benefits. For safety measures, the Securities and Exchange Board of India was created as a watchdog to regulate capital markets. Since 1994, inflation has remained at remarkable low levels and the government has ensured a relatively stable exchange rate and low rates of interest. Since the rise of inflation to a three-year high of over 7 per cent in the fist half of 2008, the government has made its main priority to tackle inflation. It has introduced some export restrictions and increased subsidies on petroleum products. In terms of foreign trade, customs tariff rates were slashed from the peak level of 150 per cent in 1991 to just 25 percent in 2003. The rates were further reduced to 15 per cent by 2005. Import licensing was dismantled and quantitative restrictions on imports were phased out two years ahead of India's WTO schedule. Openness stimulated linkages with export markets and at the same time increased competition from imports raised the efficiency of domestic firms. India also enjoyed external stability and has acceptable conditions of internal stability in terms of safety and security.
- *Micro-economic policies* need to ensure that markets are dynamic, competitive and well regulated. The Government of India has enacted the Competition Act in 2002, replacing the Monopolies and Restrictive Trade Practices Act of 1969. The new competition policy has a key role to play in curbing anti-competitive practices. India's markets are monopolized in only few areas reserved to the public sector. The major element in industrial deregulation has been the Industrial Policy Statement of 1991 which reduced gradually the list of sectors of industry reserved for the

Table 6. Time taken to undertake business-related procedures

Procedure	Brazil	China	India	Sweden
Time required for starting a Business (days)	152	41	89	16
Time required for registering a property (days)	42	32	67	2
Time required for enforcing contracts (days)	566	241	425	208
Time required to complete insolvency proceedings (year)	10	2.4	10	2

Source: World Bank, "Doing Business in 2006", World Bank Group.

public sector to four: defence, atomic energy, specified minerals and railway transport. Gradual divestments took place first in the form of sales of minority stakes in profit-making enterprises, and then in 2003-2004 the government also started the offering of shares on the equity market. Further reforms helped simplify licensing and government approval procedures. In particular, a 'single window' system was adopted in most of the States of India for granting approval for setting up industrial units. It should be noted however that industrial licensing was virtually abolished, except for industries where licensing continued to be applied based on public health, safety and security considerations.

- The latest World Bank "Doing Business" report (World Bank, 2007), shows that India has made the most consistent progress among South Asian nations in the area of improving the investment climate, but still only ranks 116 among the 155 countries surveyed. The same report placed India among the top 10 reformers in the world in 2004 but pointed to a continuing heavy regulatory burden on businesses. For example, the average time it takes to secure clearance for a start-up in India is 89 days – much longer than in China where the same procedure on average takes 41 days. Furthermore, India faces severe problems in enforcing contracts and registering property, as shown in table 6, which call for reforms in business legislation.

The Government of India also made efforts to minimize corruption, protect property rights, improve governance and provide access to justice. However, there are still severe problems with the enforcement of contracts and bankruptcy procedures are also inefficient (Beath, 2006).

- The availability of *human capital* - both general education and specific skills - is not only an important determinant of where investment will take place, but it is also crucial for ensuring that there will be technological spillover effects. In surveys conducted among investors praise the availability and cost of skilled labour in India (Beath, 2006). However, India's educational system has deficiencies. Although there are centres of excellence such as the Indian Institute of Management and the Indian Institute of Technology, many of the universities have inadequate facilities and substandard quality of instructions. In addition, complex and rigid labour laws have also been cited by investors as a constraint to job creation (Beath, 2006).

- The state of a country's *physical and technological infrastructure* is a significant determinant of transaction costs and of a country's suitability as an export base for competing in world markets. A main government's concern in India has been that rapid economic growth will be difficult to sustain unless serious infrastructure deficiencies are addressed. A number of initiatives have therefore been taken to develop the backbone infrastructure services. They include:

- *Telecommunication:* Until the early 1990s, private firms, both local and international were not permitted to provide telecommunication services or independently manufacture telecommunications equipment in India. Indian telephony was a Government monopoly, regulated and operated by the Department of Telecommunication. Only Indian registered companies with over 10 per cent participation from an experienced TNC could bid for these licences. However, the FDI cap was 49 per cent and the Indian partner should have 51 per cent majority control. In 1991, to relieve the acute telecommunication shortage, the government completely opened up the telecommunication equipment manufacturing to the private sector and permitted 100 per cent foreign ownership in this sector.

- *Power:* This sector – considered strategically – has been the first to open up to FDI in 1991. Foreign power companies were allowed 100 per cent ownership, automatic investment approvals and other incentives. Administrative and financial responsibility for the sector is split between the Central Government in Delhi and State government at the provincial level. Before the reform, the approach was monopolistic in nature. The power generation sector was fully opened to FDI after the reform; however, the transmission and distribution of power, as well as nuclear energy, remained closed to private investors. In addition, a debt-equity ratio of up to 4:1 was permitted. At least 20 per cent of total outlays was to comprise of equity and at least 11 per cent of total project financing should come from private sources and at least 60 per cent was to come from sources other than public financial institutions.

- *Public-private partnerships.* The government has focused on promoting infrastructure development through public-private partnerships (PPP). This approach was initiated with some success, particularly in road and rail construction.

- The BJP's national highway programme was conceived and implemented by means of a public-private partnership. It has enjoyed considerable success, particularly in the 'Golden Quadrilateral' between Mumbai, Delhi, Kolkata and Chennai.
- Special purpose vehicles were set up between the government and private companies to develop new transport networks in major metropolitan areas. The Delhi Metro, which drew on Japanese finance, is the prime example. Metro networks are now operational in Bangalore, Mumbai and Chennai.
- Mumbai and Delhi airports were modernized and investment in the power sector was made possible through public-private partnerships. For example, a new initiative to increase electricity capacity by 100,000 megawatts by 2012 has drawn bids from private companies to build and operate a series of 'super-mega' power stations situated adjacent to coal mines.
- *Special economic zones:* The government is also hoping to draw private capital into infrastructure through the expansion of special economic zones. These zones enjoy significant tax advantages and immunity from a range of restrictive government regulations, but companies seeking to establish them must guarantee to contribute to infrastructure development. Several zones are committed to building power stations, oil refineries and port facilities.

4.2. Attracting FDI strategically

After a piecemeal relaxation over many years, India allows FDI up to 100 per cent in most industries. In a few sectors, an initial 100 per cent foreign holding is permitted, but the foreign company must later divest 26 per cent to Indian partners or the general public, including for example tea cultivation and modernization, plantation. The liberalization efforts continued over time and as of 2008 sectors restricted to FDI included:

- retail trade (excluding single brand/ product retailing);
- lottery business; gambling and betting;
- atomic energy.

In addition, the Government allowed FDI of up to 100 per cent ownership by means of the automatic route. With automatic approval, companies need not to obtain permission from the government or the central bank before investing; they simply have to file documents ex-post facto with the central bank.

In some sectors that the government wants to keep monitoring closely, automatic FDI approvals is not available. These sectors include public sector petroleum refining companies, printing and publishing, defence production, courier services, the tea industry, investing companies in infrastructure and service sector (except telecom) assets reconstruction companies, minerals for nuclear power, a range of broadcasting services, some trading including retail trading and satellites. Automatic approval is also not available for FDI stakes exceeding 74 per cent in existing airport projects and in stakes above 49 per cent in some telecom services. The Foreign Investment Promotion Board considers proposals for foreign equity stakes where automatic approval is not permitted or those exceeding sector specific caps on a case-by-case basis. The board is also the contact point for all other investments, such as for TNCs with investment plans in the countries, and for companies seeking technical collaborations in the same field in India.

The Government streamlined approvals and committed to deciding on proposed FDI projects within 30 days. The screening and approval process implies that often projects are negotiated and clearance from different agencies has proved cumbersome. To address the situation, the government set up a Foreign Investment Implementation Authority in 1999 to speed up the approval process. Industrial licences are required for six specific sectors and obtaining them constitutes another layer of approvals. These sectors include alcohol, cigarettes, defence aerospace and electronics, hazardous chemicals and industrial explosive. Licences are also required for firms investing in sector reserved for small units.

After the onset of economic liberalization, when the role of the government shifted from a regulatory to a promotional one, the Government of India set up a specialized cell for investment promotion in the Secretariat for Industrial Assistance in the Department of Industrial Policy and Promotion. It functions as a single window for entrepreneurial assistance, investor facilitation and processing of applications requiring government approval. The cell has the responsibility of disseminating information on the investment climate in India, of giving assistance to entrepreneurs and investors in establishing their projects and of providing liaison with other agencies and State governments. The cell operates country desks, organizes marketing and specific investment promotion events abroad. The cell maintains a website (http://dipp.gov.in) providing information to investors and coordinates an initiative to establish a Government-to-Business portal with services across central, State and local governments. The Indian Government's proactive approach to enhance and facilitate greater FDI in India is reflected by the constitution of a new Investment Commission in 2004, under the Ministry of Finance. The Commission has been given operational autonomy to act as an interlocutor to attract new investors, and its target is to secure specific level of investment every year. Its mandate is also to promote dialogue with large industry groups both in India and abroad, in order to identify key issues regarding the attraction of FDI, to provide recommendations on more efficient policies and procedures, and to submit specific investment proposals (that require fast-tracked approval) directly to the Government. In addition to the Investment Commission, several agencies are involved in facilitating investment projects in India on a regular basis (see Table 7).

Table 7. Main FDI agencies

Department of Industrial Policy & Promotion, Government of India (DIPP)	Develops FDI policy, sectoral equity caps and procedures.
Secretariat for Industrial Assistance (SIA)	A "single window" service for entrepreneurial assistance, Investor facilitation and monitoring implementation of the projects.
Foreign Investment Implementation Authority (FIIA)	Facilitates quick translation of FDI approvals into implementation. Provides a pro-active one stop after care service to foreign investors by helping them obtain necessary approvals, sort out operational problems and meet with various government agencies to find solution to their problems.
Foreign Investment Promotion Board (FIPB)	Facilitates investment of international companies, non-resident Indians, and other foreign investors. Foreign Investment proposed not covered under the "automatic route" are considered for governmental approval by FIPB.
Investment and Technology Promotion (ITP), Ministry of External Affairs	Disseminates FDI policy and procedures, the taxation system as well as possible funding options and IPRs regulation.

The Government of India has designed incentives to attract investment to specific industries, promote the development of poor regions and encourage exports. Incentives include tax and non-tax incentives for greenfield investment, special incentives for specific industries such as power, ports, highways, electronics and software, incentives for units in less developed regions, as well as exports incentives. Tax holidays are for 10-15 years depending on industries and regions. Developers of infrastructure projects enjoy a 10-year tax holiday, as well as operators of airports, seaports, inland ports and waterways. Telecommunications benefit from a five-year tax holiday and a 30 per cent tax deduction for the next five years, upon fulfilment of certain conditions. In 2004, the Government also introduced basic customs exemptions for the import of specified infrastructure equipment for basic, cellular, internet operation. It also exempted the import of goods for the manufacture of telecommunications-grade optical fibres and cable as well as the imports of specified capital goods and inputs for the electronics industry. Customs duty exemptions are also available for the information technology industry, including computers and software. Export industries enjoy some duty-free import entitlements. Research and development expenses are fully tax deductible, and accelerated depreciation is available for some industries. Among the target industries are the pharmaceuticals, knowledge-based companies and car companies. Agriculture and small-scale producers are eligible for various incentives including tax holidays, deductions and favourable excise-duty rates.

In order to actively attract FDI, in 2000 the Government established a series of Special Economic Zones (SEZs). The intention was to transform these zones into engines of economic growth which would be supported by quality infrastructure and complemented by an attractive fiscal package, both at the federal and State level. The Special Economic Zones Act of 2005 provided for drastic simplification of procedures and for a single window clearance on matters relating to central and State governments. The Act granted exemptions for all indirect taxes and duties (customs duties, excise, VAT, etc) and full income tax exemption for 5 years, followed by 50 per cent exemption of the next two years, and 50 per cent of ploughed-back profits for the next three years of operation. None of the FDI equity caps are applicable to units in SEZs, including those sectors reserved for small-scale industries. SEZs are exempted from the requirements of industrial licensing. The SEZ legislation also provides for the establishment of an international financial services centre to facilitate financial services for SEZ units. Offshore banking units (OBUs) will be permitted to operate in SEZs, virtually like a foreign branch of a bank, to make available financing at international rates. The OBUs will enjoy exemptions from certain Reserve Bank of India (central bank) requirements. There are currently about 250 SEZs at various stages of implementation in India (www.sezindia.nic.in).

States play a major role in attracting FDI and have a large degree of freedom in policy-making. Among the Indian States, Maharashtra and Andhra Pradesh stand out for being in the forefront in sustaining industrial growth and in creating an environment conducive to industrial development. Both States have reached peaks of excellence in several sectors, such as electronics hardware, automobiles and auto components, consumer durables, chemicals, pharmaceuticals, information technology and biotechnology. By establishing SEZs and technological parks, as well as offering an excellent infrastructural support and quality trained manpower, they have built a solid productive capacity and indigenous innovation capabilities and have proactively attracted new FDI inflows.

For example, in 2006 the State of Maharashtra launched a new industrial, investment, and infrastructure development plan to provide a global competitive edge to local industry. A new government cell was created to facilitate FDI and a high-level committee was established to accord fast track clearances for new investment proposals. The cell functions as single point contact for all inquiries from foreign investors, providing information on permissions, procedures, guidelines of the Central Government and the Reserve Bank of India and providing hand-holding services (Government of Maharashtra, 2007). On the other hand, in 2006 the State of Andhra Pradesh established an autonomous body, AP Invest, to take responsibility of investment promotion. The agency provides timely clearances and assistance to investors, and helps to remove administrative obstacles and managerial impediments (Government of Andhra Pradesh, 2005).

4.3. Strengthening the absorptive capacity

Recognizing the importance of improving the international competitiveness of SMEs, the Indian Government has launched a series of measures to assist the process of upgrading of local businesses. In August

2000, the Government announced comprehensive policy measures based on the recommendations of a study group on SME development and the Group of Cabinet Ministers. Policies relating to infrastructure, financing, innovation, technology, and technical training were created to help increase the absorptive capacity of local SMEs. In 2006, the Government further enacted the Micro, Small and Medium Enterprise Development (MSME) Act to clearly define the MSME sector and put in place a structure for overseeing and regulating its development. The Act aims at promoting the design and adoption of targeted measures to help remove the major obstacles to MSMEs development, which include: difficulty of accessing finance and obtaining loans; unfair treatment of larger procurement companies; ineffective business registration process; and lack of management skills. In particular, the Act contained measures aimed at providing the following support to MSMEs (Government of India, 2006).

- *Credit support* to the public sector banks to ensure 20 per cent year-on-year growth in credit to MSMEs by augmenting portfolio risk funds and enacting of regulations on limited liability partnerships in order to facilitate the infusion of equity and ventures capital funding in MSMEs.
- *Fiscal support* by increasing the General Excise Exemption (GEE) limit and extending GEE benefits to small-sized enterprises on their graduation to medium-sized enterprises for a limited period.
- *Technological upgrading support* by setting up four development centres for the agro-food processing and footwear industries, assisting the attainment of ISO 9000 and ISO 14001 standards and covering the costs of obtaining certification on "Hazard Analysis and Critical Control Points".
- *Marketing support* by promoting ICTs in the Indian manufacturing sector, establishing a design clinic scheme and providing intellectual property market assistance/technology upgrading activities.
- *Managerial support* by creating an Entrepreneurship Development Programme and providing financial assistance to selected management and business schools to allow them to conduct tailor-made courses for new and existing MSMEs, as well as to run 1,200 entrepreneurial clubs.
- *Gender support* by providing financial assistance to women owned enterprises in terms of credit guarantees, establishing exhibition centres for display and sale of products, giving 50 per cent concession in fees to women candidates in entrepreneurship/management development programmes, and facilitating export by women entrepreneurs through international fairs.

Additionally, financial measures such as the "Policy Package for Stepping up Credit to SMEs" were also announced to promote collaborations between private banks and the Small Industries Development Bank of India (SIDBI) (Reserve Bank of India, 2004). SIDBI is the main Indian financial institution for promoting, financing and developing MSMEs in India. It provides long-term credit and also refinances loans extended by other eligible loan institutions. This organization is unique in that it also participates in the development and upgrading of local MSMEs.

Specifically, SIDBI concentrates on activities aimed at: enterprise promotion with emphasis on rural industrialization; human resource development; technology modernization; environmental protection; quality management; market promotion and information dissemination. For example, in an initiative led by SIDBI in 2001, commercial banks were requested to develop schemes to encourage investment in technology modernization. As such, a capital grant of 50 per cent was provided to MSMEs that wished to operate testing laboratories, on the condition that they abided by international standards.

SIDBI also launched a national programme for innovation and incubation, which aimed to promote and facilitate the incubation of knowledge and technology-based enterprises. These innovation and incubator centres were set up within research institutes with SIDBI providing Rs. 2.35 million for the building and infrastructure, and another Rs.2 million for the operation of such centres. In addition to financial resources, the centres provided technical entrepreneurs with management support, strategic planning and test marketing.

The Indian Government, through SIDBI but also in collaboration with several other national and international institutions, has been particularly active in industrial infrastructure and cluster development schemes across a variety of sectors. Since 1998, in the manufacturing sector alone, as many as 188 cluster initiatives were launched.

Table 8 shows the impressive support given by the Government and other institutions to four of India's most promising manufacturing sectors, namely auto components, food processing, pharmaceuticals, apparel and textiles (commonly referred to as India's sunrise industries). Data show that the textile and apparel sector was the most supported, with 34 initiatives, and that the States of Andhra Pradesh, Tamil Nadu, Maharashtra, Punjab and Rajasthan were at the forefront of cluster promotion efforts (National Manufacturing Competitiveness Council 2007).

In 2003, the Indian Government decided to renovate and re-launch an earlier scheme – the Development Commissioner Small Scale Industries – under the name of "Small Industry Cluster Development Programme". The programme set up a large number of cluster development initiatives across the country, relying on technical support from specialized institutions, e.g. Product & Process Development Centres and Tata Energy Research Institutes. Support was also garnered from entrepreneurial development institutions such as the National Institute of Small Industry Extension Training and the Entrepreneurship Development Institute of India. State-level consultancy organisations were also formed, including the Andhra Pradesh Industrial Technical Consultancy Organisation (APITCO) and the Gujarat Industrial Technical Consultancy Organisation (GITCO).

Table 8. Cluster development initiatives in selected Indian manufacturing sectors, 1998-2007

Sector	No.	Name of cluster (State)	Organization
Auto components	9	Vijayawada (Andhra Pradesh); Vijayawada, (Andhra Pradesh); Gurgaon (Haryana); Jamshedpur (Jharkhand); Jamshedpur (Jharkhand); Hubli (Karnataka); Aurangabad (Maharashtra); Pune (Maharashtra); Chennai (Tamil Nadu)	NSIC; SBI Uptech; SIDO; UNIDO
Food Processing	14	Food processing (Krishna, Andhra Pradesh); Fruit processing, Granite polishing (Chittor, Andhra Pradesh); Mango jelly (Godavari, Andhra Pradesh) Fish processing (Veraval, Gujarat); Food processing (Parwanoo, Himachal Pradesh); Fruit processing (Chittor, Karnataka); Agro and food process (Nasik, Maharashtra); Agro processing (Sanjay Nagar Kachhi Bast, Rajasthan); Rural culture (Tonk district, Rajasthan); Sago and starch industry (Salem, Tamil Nadu); Sago industry (Samalkot, Tamil Nadu); Starch & Sago industries (Salem, Tamil Nadu); Rapeseed mustard (Agra, Bharatpur Mathura, Uttar Pradesh); Fruit processing (Hubli, Karnataka)	AP Govt; UNIDO; Gujarat Govt; NSIC; RCCI; SBI Uptech; SIDO; SIDBI
Pharmaceuticals	11	Hyderabad (Andhra Pradesh); Margao (Goa); Baroda (Gujarat); Ahmedabad (Gujarat); Indore (Madhya Pradesh); Thane and Raigarh (Maharashtra); Thane (Maharashtra); Udaipur, Dholpur and Alwar district (Rajasthan)	NSIC, UNIDO, SIDO
Apparel and Textiles	34	Cotton Hosiery (Kolkatta, West Bengal); Zari work, (Howrah, West Bengal); Zari work (Howrah, West Bengal); Defence related textiles (Kanpur, Uttar Pradesh); Cotton Hosiery (Kanpur, Uttar Pradesh); Surgical textiles (Madurai/Rajapalayam, Tamil Nadu); Cotton Knitwear (Tirupur, Tamil Nadu); Gauze and Bandage Cloth (Madurai, Tamil Nadu), Knitwear and Garments (Coimbatore, Tamil Nadu); Gauze and Bandage Cloth (Madurai, Tamil Nadu); Textile (Sanganer, Rajasthan); Numdah (special wool) processing (Poorani, Tonk district, Rajasthan); Numdah products (Bharni, Tonk district, Rajasthan); Numdah products (Kakod, Tonk district, Rajasthan); Numdah products (Poorani, Tonk district, Rajasthan); Woolen Knitwear (Ludhiana, Punjab); Knitwear (Ludhiana, Punjab); Knitwear (Ludhiana, Punjab); Hosiery (Ludhiana, Punjab); Cotton Ginning & Pressing (Sendhwa/Indore, Madhya Pradesh); Sarees (Chanderi, Madhya Pradesh); Sarees (Chanderi, Madhya Pradesh); Jeans (Bellary, Karnataka); Jeans/ready-made garments (Bellary, Karnataka); Handlooms and Made-ups (Panipat, Haryana); Made-Ups (Panipat, Haryana); Zari jutties (Rewari district, Haryana); Garment (Ahmedabad, Gujarat); Apparel Manufacturing (Noida/New Delhi); Cotton Ginning and Pressing (Guntur, Andhra Pradesh); Muga silk (Dhemaji district, Assam); Readymade Garments (Delhi); Hand Block Printing Textiles (Sanganer, Rajasthan)	Textiles Committee; SIDBI; SIDO; NSIC; RCCI; SBI Uptech; UNIDO; Gujarat Govt

Source: National Manufacturing Competitiveness Council (http://www.clusters.org/vikas/cpi.htm.

Public-private partnerships were pivotal to the implementation of the programme: the public sector provided financial support through various schemes, not exceeding a cap of 80 per cent of the total project cost; whereas, the private sector could catalyse investments through innovative financing methods. The scope of SICDP encompassed both "soft" and "hard" initiatives. It promoted general awareness and trust-building, counselling, training and capacity-building, exposure visits, credit facilitation and market developments. Further, it pursued technology improvements, quality standardization and testing – mainly in the form of 'Common Facility Centres' (CFCs) equipped with a variety of hardware, which individual cluster units could not afford but which were necessary for technology upgrading and ensuring quality standards (Government of India, 2007).

Special consideration should also be conferred to the extensive Cluster Development Programme implemented by the Indian Government in cooperation with UNIDO since 1997. The programme helped several clusters (e.g. Jaipur, Pune, Bangalore, Ludhiana) become competitive at the global level. In particular, the programme built a comprehensive database on 380 industrial clusters and provided technical assistance in government-designed cluster initiatives. It further sensitized over 600 policymakers, development agents and academics to the importance of clusters for economic development. In the context of this programme, the government extensively invested in common facility centres, sites for new enterprises, the upgrading of existing industrial infrastructure and exhibition halls for the display and sale of the products and/or services of MSMEs. Some examples of successful clusters established under this initiative are the Ludhiana clusters in Punjab which represent 95 per cent of the country's woollen knitwear and 85 per cent of its sewing machines; the Agra cluster in Utter Pradesh specializing in leather footwear; and the Chennai clusters in Tamil Nadu which focus on the auto component sector and attracting new OEMs such as BMW (see Section 5) (UNIDO, 2005).

4.4. Creating TNC-SME linkages

Recognizing the importance of TNC-SME linkages in the country's economic progress, the Government of India began to actively promote their development in 1975. One of the key initiatives for this purpose was granting special status to "ancillary units" in the SME sector and adopting various policies to engender their development. For example,

contract work and fiscal concessions, special credit schemes, and incentives in terms of complete exemption from excise duties or payment of lower rates.

According to the official definition, an ancillary unit is "an industrial undertaking which is engaged, or is proposed to be engaged, in the manufacture or production of parts, components, sub-assemblies, tooling or intermediates, or the rendering of services and the undertaking of supplies or renders or proposes to supply or render not less than 50 per cent of its production or services, as the case may be, to one or more other industrial undertakings and whose investment in fixed assets in plant and machinery whether held on ownership terms or on lease or on hire-purchase, does not exceed Rs. 10 million." (Government of India, 2004).

The guidelines for promoting linkages between small and large industries through ancillarisation were defined in 1978 by the Small Industries Development Organization, in conjunction with the Bureau of Public Enterprise - the controlling agency of large public enterprises. According to these guidelines, large public companies were required to concentrate on core activities such as design, product development, R&D and manufacturing critical items. Meanwhile, SMEs were mandated to manufacture standard items that required less advanced technologies. By contrast, large enterprises were required to provide raw materials, technological support, tooling and testing equipment (Government of India, Indian Export-Import Portal).

The concept of "ancillary units" proved to be extremely effective, though limited to specific geographic areas in close proximity to large enterprises. A prime example of such success can be found in the automotive component industry, as illustrated in more detail in the following section. Major automotive manufactures such as Tata Motors, Escorts, Eicher, Ashok Leyland, Mahindra & Mahindra and Punjab Tractors successfully developed a chain of ancillaries to streamline their operations. Today, most of the components required by these large manufacturing firms are subcontracted to smaller local vendors.

This success of ancillary units motivated the Indian Government to pursue the development of local supplier networks on an ongoing-basis. Under the **Ancillary Development Programme**, introduced in 1978 and relaunched in 1995, a number of subcontracting programmes were initiated with the aim of creating a detailed database on manufactured products or services provided by SMEs. Such initiatives include: collecting detailed information on the inputs required by large firms on a regular basis; arranging buyer-seller meetings for displaying the inputs required by large enterprises; and sharing the technical details with local SMEs (Government of India, Indian Export-Import Portal).

In addition to the Ancillary Development Programme, since 1995 the Small Industry Development Organisation has also conducted a number of **Vendor Development Programmes** at the National and State levels. These programmes provide platforms for buyers and suppliers to interact with each other, thereby allowing large public organizations from defence, railways and energy sectors to identify capable local entrepreneurs and substitute a number of imported parts with local products. During 2001-2002, for example, about 50 Vendor Development Programmes were conducted, 20 of which were at the national level and the others at the state and regional levels (Government of India, Indian Export-Import Portal).

5. Business linkages case studies

The following section describes the development of specific clusters in two of India's most promising industries, namely auto components and information technology. The case studies presented below will highlight the key factors that have promoted the creation of TNC-SME business linkages in these clusters.

5.1. Developing the auto component industry in India

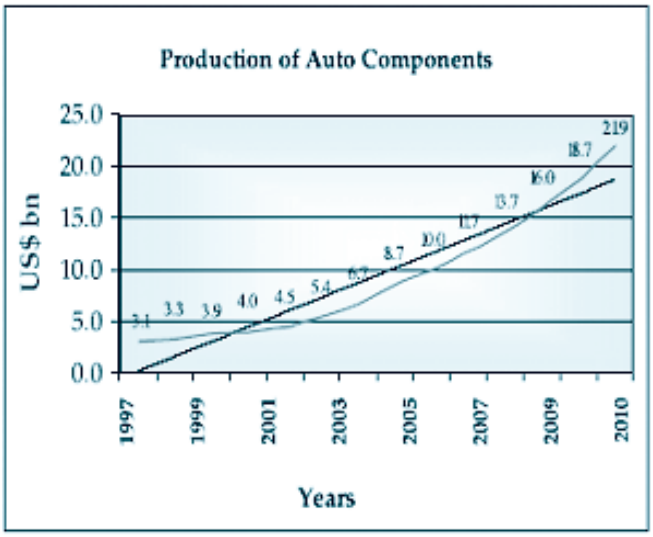
The automotive industry is one of the core industries in India. Since 2000, the Indian automotive sector as a whole has grown by approximately 15-20 per cent per year, and it is expected that the trend will continue for the next decade. With its pronounced tendency to create backward and forward linkages, the automotive industry has a strong multiplier effect and has been one of the main drivers of Indian economic growth. The industry's economic impact is reflected in its total turnover of around $34 billion in 2006, and in the creation of direct and indirect employment opportunities for over 1.31 million people.[33]

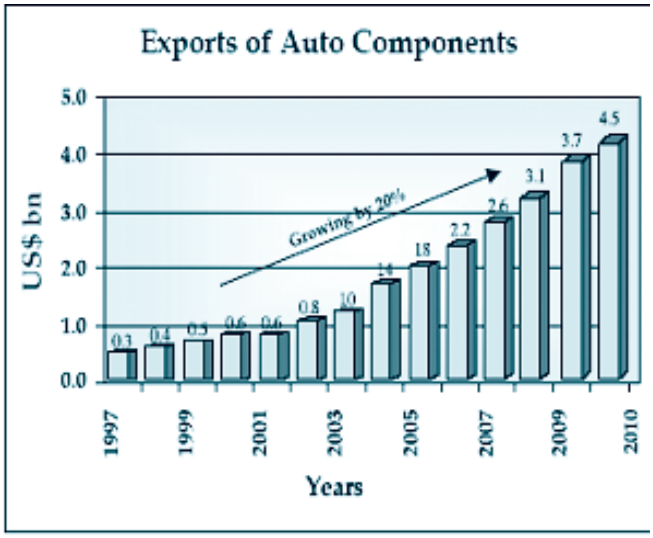
Since the liberalization of the market in 1991, TNCs like GM, Hyundai, Ford and Toyota have established their manufacturing outlets in India. This is reflected in the sharp increase in the number of vehicle units produced, from 2 million in 1991 to 9.7 million in 2006, accounting for nearly 7 per cent of global automobile production and 2.4 per cent of four-wheeler production (Ministry of External Affairs, 2007). The availability of high-skilled labour, particularly in engineering, of raw materials, a large domestic market and enabling domestic policies helped to lure investors from across the globe, spurring the growth of the Indian automotive industry.

In particular, the **auto component** manufacturing sector is among the fastest growing segments of the Indian automotive industry. Figures 1 and 2 show the impressive growth sustained by this sector over the past decade (Dun & Bradstreet, 2007). The sector's successful growth rate can be attributed to the increasing outsourcing trend of global automobile giants. India is one of the preferred outsourcing destinations of TNCs, largely due to quality and cost advantages. Compared to western competitors, global manufacturers save 25-30 per cent of their production costs when sourcing from Indian companies. With its 500 first-tier domestic suppliers formally integrated into TNC supply chains, India has developed the capacity to produce almost all components required for automobile production. Additionally, there are about 10,000 companies functioning as lower-tier suppliers, providing a diverse range

[33] Unless otherwise noted, the figures cited in this section are based on the Final Automotive Mission Plan 2006-2016, issued by India's Ministry of Heavy Industries and Public Enterprises.

Figures 1 and 2. Actual and estimated production and exports of auto components





Source: AMCA and Dun & Bradstreet, 2007.

Box 1. Creating business linkages in the auto component sector: the case of Tata Motors

Established in 1945, Tata Motor Limited (TML) is today India's largest auto manufacturer. The company has assembly operations in Malaysia, Bangladesh and South Africa and exports to over 70 countries in Europe, Africa, South America, the Middle East, Asia and Australia. After the economic reforms of 1991, the promotion of value chains, their organization and management started to critically matter for Indian companies to remain competitive in the global economy. As a consequence, TML dramatically increased not only the quantity but also the value content of its outsourced parts. The company's strategy shifted from solely contracting out some activities and operations in the pre-liberalisation period to the outsourcing of parts and aggregates in the early 1990s. Now, suppliers are even involved in developing systems and technology.

Hence, creating business linkages with SME suppliers has become a crucial element in TML's strategy, which greatly relies on the ancillarisation of domestic suppliers through established clusters in both Jamshedpur and Pune. The latter town was an attractive location to TML because of its proximity to Mumbai, India's commercial centre with a seaport and an international airport, its good road transport infrastructure and the availability of skilled labour. Therefore, Tata established a cluster there called the Tata Auto Component Cluster, which includes company divisions such as Tata Yazaki and Tata Toyo. It also includes joint ventures with foreign firms such as Keihin Fie and Pune Lucas TVS (UNIDO, 2007).

TML's experience in Pune demonstrates that the key success factors underpinning its strategy was a consistently competitive vendor base and supplier upgrading. This was achieved by: a) encouraging global technology partnerships for components and systems; b) improving capabilities and competencies with regard to quality, productivity and costs; and c) providing business opportunities. Furthermore, the upgrading of its SME suppliers entailed: registration of suppliers technical support for development as well as quality; project guidance; tooling support; financial support; training support; guaranteed business; and raw materials support. The company constantly monitors the quality of its supplier's products and processes, thereby ensuring that they maintain a competitive edge. Such a sound and long-term relationship between TML and its suppliers has proved to be beneficial for all parties. The successful relationships have improved TMLs productivity efficiency, allowed it to benefit from integrating supplier expertise into vehicle programs, reduced its design and development time, and provided the company key access to market trends and international technology. SME suppliers have benefitted from these arrangements as the outsourcing opportunities have provided them with valuable exposure to integrated product development, customer and market knowledge, and has increased their opportunities for international partnering.

Source: UNCTAD, 2007.

of inputs and replacement parts, such as engine parts (23 per cent), electrical parts (7 per cent), suspension and braking parts (11 per cent) and drive and transmission steering parts (23 per cent) (Dun & Bradstreet, 2007).

Among the liberalization policies adopted by the Government, the elimination of licensing and approvals of all imported manufacturing components had a strong positive impact on the growth of the Indian automotive industry. Another landmark reform related to FDI concerned the automatic approval for foreign equity investment up to 100 per cent of automobile and auto component manufactures. These policies and reforms helped the Indian automotive industry to restructure, absorb new technologies and align itself with new global developments. The expected growth of the auto component industry in India will undoubtedly attract substantial foreign as well as domestic investment. In fact, it is estimated that global sourcing of components from India will be US$ 5.9 billion in 2008-2009, and is expected to rise to US$ 20 billion in seven years. Since 2000, the auto component industry alone has recorded a domestic investment level of US$ 440 million and over US$ 500 million of FDI. The investment figure is expected to grow considerably in the future, and the Indian Investment Commission is hoping to attract US$ 5 billion of foreign investment in the next five years in order to increase India's share of the global auto component market from 0.4 per cent in 2006 to 3-4 per cent in 2011 (IBEF, 2007).

From a policy perspective, there is a wide expectation that the growth of the auto component industry will have a favourable impact on the development of local SME suppliers, but also the awareness that this will pose increasing challenges. Evidence shows in fact that most global auto assemblers have already or are currently adopting leaner manufacturing systems for cost reduction and efficiency maximization, and consolidating their network of international suppliers. For example, in less than two years Maruti Udyog Ltd. (a joint venture between the Indian Government and Suzuki Motors Corporation, Japan) reduced its first-tier supplier base from 400 units to about 300 units. Tata Engineering and Locomotive Co. Ltd. (part of the largest domestic automobile manufacturer) reduced its supplier base from 1,200 to about 500 units in early 1997 (Okada, 2004). This change in the operational strategy of OEMs represents both a challenge and an opportunity for SMEs, since the streamlining of the production process can facilitate them in upgrading their efficiency status and scaling-up in size, thereby acquiring a critical size to compete in international markets (see box 1).

For small domestic suppliers, the key to competitiveness entails specialization in niche products and capability upgrading in order to allow them to become higher tier suppliers, thereby climbing the value chain ladder. The Indian experience shows that this strategy can be ideally pursued when auto components firms are located in close proximity to industrial clusters, which allow SMEs to obtain the benefits of agglomeration economies, while at the same time reduce infrastructure, communication and distribution costs.

In India, 24 auto components clusters have been identified, as illustrated in Table 9.

A prominent example of cluster promotion efforts is represented by the case of **Chennai,** in the State of Tamil Nadu. This cluster was established in the early 1960s following the setting up of Ashok Leyland, TVS Group, Rane Group and other companies, as well as a series of supportive initiatives of federal and local authorities. However, it was only after the liberalization reforms of the early 1990s that global OEMs, such as Ford, Hyundai and Hindustan Motors Ltd[34] established themselves in Chennai, investing US$ 1 billion, US$ 400 million and US$ 150 million, respectively. The investment objectives were to at once target the Indian market and establish a platform for global sales (Tewari 2003, cited in Okada and Siddharthan, 2007). The entrance of these new players boosted the components sector in Chennai and the development of a number of competitive first and second-tier suppliers (see Box 2), to the point that today Chennai is popularly known as the "Detroit of India".

Table 9. Auto component clusters in India

Auto Component Clusters in India	
State	**No.**
Andhra Pradesh	1
Delhi	1
Gujarat	5
Haryana	3
Jharkhand	1
Karnataka	2
Maharashtra	5
Madhya Pradesh	1
Punjab	4
Tamil Nadu	1

Source: Dun and Bradstreet (2006).

Key factors that led to the success of the Chennai cluster are its adequate infrastructure, particularly the telecom network and the inter-modal transportation system, as well as its endowment of skilled human resources. Tamil Nadu has the largest number of engineering graduates in the country and has the highest number of engineering colleges, as well as public and private technical institutes. Other crucial factors of success are the strategic geographical position of Chennai in the north of Tamil Nadu, in close proximity to other States like Karnataka, Kerala, and Andhra Pradesh. Governmental support in delivering technology parks, including IT and auto parks, and an overall stable and sound macroeconomic environment were equally important. During the inception phase, Chennai's proximity to a seaport also played an important role in cluster development, since the industry heavily depended on imports. At present, Chennai can rely on an international airport, two sea ports and other minor ports. In 2005 the Small Industries Services Institutes (SISI) in collaboration with UNIDO, conducted a diagnostic study report of the auto component cluster in Chennai. Based on field interviews, a SWOT analysis was carried out, which is summarized in Table 10.

[34] Hindustan Motors collaborates with Mitsubishi Motors.

Since the early 1990s, Chennai benefited from substantial State government support, consisting of financial incentives and capital subsidies, power tariff concessions, sales tax waiver and the creation of industrial estates. In 2000, Chennai participated in the Small Industry Cluster Development Programme (SICDP). The programme was extremely effective in improving the cluster competitiveness by upgrading the local first tier suppliers serving OEMs in terms of: quality and efficiency; directly linking SMEs to the domestic and export market using the export consortiaapproach; facilitating technology and quality upgrading of local second and third tier suppliers; building the capacity of local associations and strengthening public-private sector partnerships to foster mutual learning and seize spill over effects among local companies. Some State agencies also participated in major efforts to attract FDI. These include the Electronic Corporation of Tamil Nadu, the State Industrial Promotion Council of Tamil Nadu, the Tamil Nadu Industrial Guidance and Export Promotion Bureau, and the Electronics Test and Development Center (Okada and Siddharthan 2007). Finally, in 2002-2003 the State government devised a strategy plan focused on quality improvement, waste minimization, and rationalization of their supply chains, which set the ambitious objective of 20 per cent annual growth with 30 per cent growth in exports in five years so as to become a global source for auto component supplies (Kumar S.R., 2005).

Box 2. Presence of first, second and third-tier suppliers in the Chennai Cluster

First-tier suppliers:

According to the Auto Components Manufacturers Association (ACMA), about 40 medium and large-sized enterprises are located in the cluster. These firms are typically aware of the importance of striking up agreements with foreign partners in their business strategy. For instance, TVS Group formed a joint venture with the British company, Lucas Variety, in 1961 and with the American Cherry Electric Corporation in 1994. Most firms have also entered the export markets successfully, thanks to their exposure to world class manufacturing practices. For example, Sundaram Clayton Ltd. has been the market leader of brake systems in India since its inception, and it currently exports to the United States, the United Kingdom, Egypt, Australia, Sri Lanka, the Middle East and East Asian countries. Technical and financial cooperation with foreign partners has improved quality production and introduced important concepts into the production process like "Just in Time" or "Zero Percent Rejection". Therefore, a positive trickling down effect led these firms to start requiring their suppliers to focus on quality. Some firms, like TVS Group, instituted management training, technology catch-up and quality upgrading programmes for their vendors. Lastly, the presence of a sound IT sector in Chennai has enabled SMEs to take advantage of Business to Business Commerce.35

Second-tier-2 suppliers:

In Chennai almost all first-tier suppliers have structured their vendors, and each of them has on the average 150 local providers who serve them as second tier suppliers. The main concerns for second tier suppliers, according to the Diagnostic Study Report (Kumar, S.R., 2005), are payment delays, lack of technical support, the loss of business partners and constant pressure to reduce costs and improve quality (e.g. quality certifications such as ISO9000). In an effort to remain competitive, most of the vendors are willing to form consortia and create a complete sub-assembly production chain.

Third-tier and other ancillaries:

The Chennai cluster comprises a wide range of small enterprises, including more than 200 small firms catering to the replacement market and 1000 "job shops" in metal cutting, grinding and metal forming. The Chennai cluster succeeded in attracting a large basin of SMEs thanks to strong government commitment. State Government has established several industrial estates, providing factory space at relatively low rents and other facilities to firms operating there. An estate provides technical services, such as mechanical, metallurgical and chemical testing laboratories, tool rooms and forging and heat treatment shops. Moreover, excise duty concessions, granted by the government, sharply reduced prices, resulting in greater profit margins for domestic enterprises. However, this method of price cutting is not linked to real cost management improvements, and so the result is that competition and quality standards deteriorate, and entrepreneurs' interests can be severely affected in the medium-long term. Therefore, better knowledge of enterprise management, cost effectiveness and technical training are still needed.

Source: S.R. Kumar, 2005.

[35] These are electronic commerce transactions between businesses, as opposed to those between businesses and other groups, such as business and individual consumers or business and government.

Table 10. SWOT analysis of the Chennai Auto Component Cluster

Strengths	Weakness
• Availability of trained and skilled manpower • Management with sound technical background • Easy availability of raw materials and other inputs • Presence of many auto component majors in the region such as Ashok Leyland, Ford, Hyundai, Car Plant, and Royal Enfield • Availability industrial parks with state-of-art technology • High annual growth rate of production and exports of auto components • Well developed transport and logistics system	• Low level of trust and lack of commonality on entrepreneurial goals • Low level of labour productivity and quality production • Slow indigenization process • Lack of brand image • Weak linkages between SMEs and institutions • Limited Research & Development efforts and slow technology upgrading • Inadequate flows of market information • Constraints on economies of scale and firms' size • Scattered production of auto components • Absence of tailor made training courses • Poor working conditions • Red tape due to excessive and rigid regulations • Lack of effective agencies for export market promotion • High electricity tariffs • High interest rates for loans • High tax and duties structure

Opportunities	Threats
• Growing domestic and international market • Product diversification • Abundant scope to cater to foreign majors setting up shop in India • Ability to cater to small batch sizes	• Fierce global competition in raw materials cost and productivity disadvantages • Slow incorporation of quality • ISO 9000/QS 9000 costly requirements • Sense of insecurity due to 'tierisation' • Non-broadening of market horizon • Resigned attitude of management due to recession • Import of second hand automobiles limiting market growth

Source: S.R. Kumar, 2005.

Table 11. Chennai Cluster Development Activities, 2002-2003

	Activities	No of Beneficiaries
1.0	Preliminary Activities	
1.1	Awareness Programme on Cluster Development	25 firms
1.2	Survey on Auto component Industries	1000 firms
2.0	Facilitating World Class Manufacturing Practices	
2.1	3 Seminars on " World Class manufacturing Practices"	75 Firms
2.2	Implementation of " World Class manufacturing Practices"	10 Firms
2.3	2 Exposure visits to world class units	20 Firms
2.4	2 Seminars on statistical quality control techniques	50 firms
2.5	Adoption of statistical quality control techniques	10 Firms
2.6	ISO-9000 certification	30 Firms
2.7	Energy audits in Heat treatment and foundry units	15 firms
2.8	Study on needs of mechanization in foundries	All foundries
3.0	Facilitation of Technology upgrading	
3.1	Survey for needs of technology up grading	Entire cluster
3.2	Networking with support institutions for finance	20 Firms
4.0	Strengthening and Creation of Networks	
4.1	Formation of 2 consortia for making full subassemblies	12 Firms
5.0	Direct Linkages of SMEs to the Market	
5.1	Printing of common brochures for two consortia	2 Consortia
5.2	Hiring of common marketing consultants	2 Consortia
5.3	Common marketing office	2 Consortia

Source: Kumar S.R., 2005.

It is worthwhile noting that in Chennai, government-led cluster development initiatives were matched by spontaneous private sector initiatives, which were instrumental in improving access to information, cooperation among stakeholders and mutual support. For example, the Auto Component Manufacturers Association (ACMA) is a national association that largely facilitated cooperation among Chennai's stakeholders through its extensive database of auto components manufacturers and their production capabilities. Through a very active regional office, ACMA also organized several buyer-seller meetings, trade fairs, seminars and lectures. The Tamil Nadu Small and Tiny Industries Association (TANSTIA) played a proactive role in promoting and nurturing local small industries. The Ambattur Industrial Estate Manufacturers' Association (AIEMA), created in 1963 to cater to the needs of medium and large-scale enterprises in the Ambattur Industrial Estate, has been so effective that other industrial associations in Tamil Nadu began looking to AIEMA for guidance. In particular, the AIEMA Technology Centre (ATC), set up to fulfil the technological, training and human resource development needs of the industrial units in Ambattur, is a model example.

Other relevant institutions which bear testimony to the remarkable cluster dynamics are the Chennai Engineering Network (CEN) and the Tamil Nadu Industrial Investment Corporation (TIIC) – the premier financial institution in the State. CEN represents the first marketing consortium formed under the Cluster Development Programme. It proved instrumental in the upgrading of different production processes like pressure die casting, gravity die casting, forging, machining, pressing, heat treatment and tooling, and served as one stop shop for all engineering services. TIIC facilitated project financing for SMEs and implemented a modernization scheme, which the units in the Auto component cluster used to upgrade their technology. Nevertheless, further efforts are required for creating a favourable industrial environment in order to establish mutual trust between economic players and improve cooperation between SMEs and institutions. This point is further illustrated in the SWOT analysis presented in Table 10 (Kumar S.R., 2005).

5.2. The information technology industry

The information technology (IT) industry has become one of the fastest growing industries in India. India's IT industry boom began in the 1990s, when the Indian software industry recorded an annual growth rate of 50 per cent, the highest of any country. In 2008, this industry is expected to contribute to 7 per cent of India's GDP, a substantial increase from 4.7 per cent in 2007 (Government of India, 2007). It is also expected to potentially generate US$ 60 billion in export revenues by 2010 (Nasscom, 2007). In terms of employment, the number of IT professionals employed in India is estimated to have grown from 284,000 in 2000 to 1.3 million in 2006. Furthermore, it is suggested that the IT sector created 2.5 times more job opportunities through indirect and induced employment, as well as direct employment opportunities (Nasscom, 2007). Direct and indirect employment in the industry is expected to grow to 2.3 million and 6.5 million, respectively, by 2010 (Nasscom and McKinsey, 2005).

The Indian IT industry has several distinct historical advantages that contribute to its success. The high level of education, an abundant English-speaking workforce, the combination of low wages, skilled labour and its' geographic time-zone, are some of the key factors that have contributed to the sector's success. These historical advantages laid a strong foundation for the Indian Government to promote sustained growth within the IT industry. Like many of India's other industries, the growth of the IT sector began to accelerate after the liberalization reforms of 1991. In conjunction with the liberalization process, the Indian Government also implemented several policies that have assisted the industry's growth. During the early 1990s, the Government implemented a 10-year tax exemption for IT startup firms, allowing firms to purchase IT products overseas without paying import duties. This policy helped IT firms in India gain access to goods at the same prices offered to firms in other parts of the world. In addition to offering tax holidays, the government also gave generous tax breaks for startup firms. For a period of 10 years, IT startup firms were also exempted from corporate income taxes.

In order to promote software exports, since 1990 the government has also introduced software technology parks (STP) (Government of India, 2005). A STP is set up by the Government, but it is registered as an autonomous agency to avoid public interference in the industry dynamics. Private sector representatives of the industry are included in the board and council of a STP. This is, therefore, meant to forge public-private partnerships in promoting the software sector. The STP in Bangalore, for example, is a partnership between the State Government of Karnataka, Tata Industries and a consortium of Singapore firms. The STP scheme is operated similar to a free trade zone, in which registered companies (units) are provided with fiscal incentives, advanced technological equipment, infrastructure and export supporting services to promote and facilitate exports of software exclusively. In 2002-2003, there were 39 centres spread over the country with registered units accounting for about 80 per cent of the country's total software exports (Kumar and Joseph, 2005).

The Government's deliberate efforts in exploiting the potential of the IT industry are also demonstrated in the creation of a specific National Task Force on Information Technology and Software Development (NTITSD) in 1998. NTITSD was mandated to develop a detailed IT action plan specifying long-term strategies and corresponding recommendations for promoting the IT industry. It was composed of senior representatives from the government, the private sector, industrial associations and academic and research institutions, hence demonstrating a shared commitment to drive industrial growth at the national level.

The emergence of India's IT industry is supported by its large pool of high quality engineering workforce. The Indian Government's national educational focus has been placed on nurturing scientists and engineers since the

post-independence period, and a group of seven engineering and technology-oriented Indian Institutes of Technology (IITs) were set up and declared as *"institutes of national importance"*. Recognizing the increasing demand for IT engineering personnel, in 1998 the Government took the initiative not only to invest in creating more IITs, but also to replicate the IIT structure to establish a group of IIITs (Indian Institutes of Information Technology) specifically for IT-related education and training. In addition to national institutions, the government allowed private investment in IT training since the early 1980s, and developed the All India Council for Technical Education (AICTE) accreditation scheme to ensure the quality of private training centres. Emphasis was also placed on promoting R&D activities in IT-related areas. Various research centres, such as the National Centre for Software Technology (NCST), the Supercomputer Education and Research Centre (SERC) and the Centre for Development of Advanced Computing, were established to promote the next generation of high-end technological expertise.

As a result of various deliberate support and incentive schemes to encourage IT startups, clusters of SMEs across India began to emerge. Today, strong networks of IT firms can be found in Bangalore, Hyderabad, Chennai, the region around Delhi and Pune. As in the auto component sector, the formation of IT clusters allows agglomeration of economies, promotes specialization, the development of complementary skills and collaboration among firms, increases the mobility of human capital and new firm creation, facilitates the diffusion of skills and knowledge, enables benchmarking of performance to motivate innovation and upgrading and promotes technological spillover effects from linkages. All these factors helped catalyse the growth of India's IT industry (Ramachandran and Ray, 2003).

Gartner Inc.[36] (2004) scrutinized the most important Indian cities, which are outsourcing locations for the IT sector. They ranked them into four tiers based on some of the following factors: infrastructure; skills availability; skills retention; access; cost of living; political support; and quality of life (Table 12). In particular, *Bangalore and Hyderabad* are two well-known clusters that have achieved paramount growth and success. Bangalore's reputation for offshoring is now well established, and Hyderabad is a thriving cluster which is expected to replace Bangalore and Mumbai as the favoured Indian destination for IT outsourcing by 2010.

Bangalore, in the State of Karnataka, is the location of one of the most prominent IT clusters in India, whose dynamism and competitiveness among industrial clusters has led it to be named the Silicon Valley of India. In 2005, Bangalore accounted for 36 per cent of the total software exports from India, the highest amount in the country. In addition, Bangalore houses over 1,500 IT firms and employs over 100,000 people. International technology powerhouses, including Intel, Cisco, IBM, and HP have all established offshore centres in Bangalore. Indian TNCs such as Infosys Technologies and Wipro are headquartered in the city (Basant, 2006).

[36] Gartner, Inc. is a leading information technology research and advisory company, which is based in the United States, and has 3,900 associates, including 1,200 research analysts and consultants in 75 countries.

Table 12. IT outsourcing locations in India

Group 1
Bangalore, Mumbai and New Delhi
Group 2
Chennai, Hyderabad, Pune, Noida, Gurgaon and Navi Mumbai
Group 3
Calcutta, Mangalore, Mohali/Chandigarh, Bhopal
Group 4
Coimbatore, Mysore, Nasik, Koji, Nagpur, Jaipur, Indore, Shimla, Raipur, Lucknow, Kanpur, Panaji, Guwahati, Bhubaneshwair, Patna, Srinagar

Source: Gartner Inc. cited in Rediff.com, 2004.

Several factors have contributed to Bangalore's growth into a dominant IT cluster. It has a large pool of highly skilled IT professionals – a result of the city's highly developed educational and research infrastructure. Bangalore houses many world class institutions including the Indian Institute of Science (IISC), Indian Institute of Information Technology (IIIT) and the Indian Institute of Management (IIM). There is also a large network of regional engineering colleges. Research organizations set up by the State government have also added to Bangalore's intellectual prominence. The presence of world-class R&D and educational institutions has turned Bangalore into a magnet for skilled labour. In fact, the density of PhDs per square kilometre in Bangalore is higher than in any other city in India. Many alumni of these institutions have migrated mostly to the United States to pursue higher education and seek career development, particularly in the software industry. They form a large diaspora network that help forge foreign business linkages with India's local IT companies (Ramachandran and Ray, 2003).

In an effort to build infrastructure, the State of Karnataka offered preferential treatment to IT firms with regards to land allocation, electrical supply provision, and communication access. The Government has also helped build technological infrastructures to aid in the growth of the IT sector. For example, Bangalore was the first site selected for the Software Technology Park scheme (STP) in 1990, which provided the city not only with the necessary infrastructure but also with advanced IT equipment (Balatchandirane, 2007).

Hyderabad, located in the State of Andhra Pradesh, is another successful IT cluster and a prime example of the positive effects of state policy on facilitating the growth of an industry. Hyderabad recorded impressive growth rates in export, for instance in just a period of one year, the software exports increased from Rs. 82.70 billion to Rs. 125.21 billion in 2005-2006. Under the leadership of Chief Minister Mr. Chandra Babu Naidu, the State Government of Andhra Pradesh has developed policy measures with incentives to aid the growth of Hyderabad's IT industry. A landmark strategy implemented by Naidu was convincing Microsoft to establish its first offshore development centre in Hyderabad by awarding extensive government commissions to the company. Attracting Microsoft spurred growth in other segments of the IT sector and lured other IT firms to the city (Balatchandirane, 2007).

The State of Andhra Pradesh also instituted numerous legal and economic incentives for IT startups. Rebates on land prices were offered to encourage building construction, 50 per cent of registration and stamp duties were waived and a 25 per cent rebate was offered on power utilities. In order to create an infrastructure to accommodate the growth of the industry, the State government privatized several municipal operations and invested heavily in the development of roads, buildings and recreational parks, as well as the maintenance of overall city cleanliness (Balatchandirane, 2007).

Hyderbad is also an intellectual hotbed and it offers its residents access to superior educational institutions such as the Indian School of Business (ISB), which is affiliated with world-renowned business schools like the Wharton School, the Kellogg School of Management at Northwestern University and the London Business School. It's Indian Institute of Information Technology (IIIT) also has strong links with large TNCs in the industry, providing joint programmes and conducting research. These factors, coupled with the superior primary and secondary education systems in Hyderabad have attracted high skilled Indian specialists to this city (Balatchandirane, 2007).

Nevertheless, despite the relatively low cost of entry and numerous thriving start-ups, both in Bangalore and Hyderabad, it is still difficult for smaller domestic firms, particularly those less technologically advanced, to link with foreign TNCs directly as partners or suppliers. Many TNCs have set up their own local affiliates to conduct product design and development, but they are cautious to outsource projects that involve critical technology. On the other hand, many small local firms are not technologically capable of handling high-end activities for TNCs. Consequently, they mainly focus on developing niche products and services for the domestic market. However, TNCs do have an incentive to provide small firms with free technical training, seminars and even basic technology to support their domestic product development, as these firms are important channels for distributing and popularizing TNCs' platforms in the large Indian market. The result is that small Indian firms are able to acquire a diverse range of IT knowledge and skills for upgrading. Some TNCs such as HP, Intel and Microsoft are more deliberate in outsourcing projects to smaller entrepreneurial firms with certain technological capacity. A study by Patibandla and Petersen (2002) outlines three types of linkages created through the outsourcing policy of HP:

- With outside specialists who were brought in-house to work on short-term projects;
- With out-tasked specialists, i.e. employees of Indian firms who would work on projects on-site at HP; and
- With out-sourced specialists from Indian firms.

Another study indicated that Intel subcontracts about 60 per cent of its software development to 20 to 25 local SMEs and Microsoft outsources about 75 per cent (Okada, 2006). Local SMEs are mainly subcontracted to conduct basic applied research, programming and application testing. Technological tasks such as IC chip design that involve core competences are completed in-house by TNCs, and TNCs apply a highly rigorous selection and screening process when choosing subcontractors/suppliers. A few TNCs such as Cisco function as venture capitalists by providing capital, technology and training to promote start-ups in India.

The increased embeddedness of foreign TNCs into the local IT industry in India, and their incentive to partner with, and outsource to, Indian firms is, to a certain extent, influenced by India's broad overseas networks in the IT industry, particularly in the U.S. It is suggested that Indian immigrants in Silicon Valley managed approximately 9 per cent of all new start-ups in the late 1990s (Balatchandirane, 2007). They play an important role in bridge-building with Indian firms to create sourcing opportunities. Some of them even invested back home in affiliates to develop software for their U.S. operations, e.g. affiliates of Mastech, CBS Inc. and IMR (Kumar and Joseph, 2005).

Since the late 1990s, an increasing number of overseas Indian IT professionals have returned to India either to head operations of TNCs, or to start their own companies. The rate of returning IT professionals is estimated to have increase from 2 per cent in 1991 to approximately 10 per cent in the late 1990s. More recent estimates suggest that in the last year nearly 60,000 professionals have returned from the U.S. to India. In both cases, they brought back not only profound management and technological expertise to further strengthen the development of the local IT industry but also significant foreign network contacts to enhance and enlarge foreign-domestic linkages (Kumar and Joseph, 2005).

The emergence of Nasscom (National Association of Software and Service Companies) as a leading voice for the industry in the country has had a strong influence on lobbying and promoting public-private collaboration and investments to sustain industrial development. The association has representatives on various committees of the Government of India, and it acts as an advisor and consultant on IT policies and support measures. It also has a firm foothold in the industry and has established strong links with key foreign and domestic players. The association has over 1,200 members and together they account for over 95 per cent of the total revenues generated by the industry in 2007. It is a single point of reference for any IT industrial information in India and a central coordinating body for promoting events such as conferences, exhibitions and delegations. It has signed MoUs with counterpart trade associations in different countries (e.g. Australia, Canada, the UK and Malaysia) to join force in promoting trade and cooperation among member companies, and to help identify and match-make business partners. The association also plays a key role in helping domestic firms upgrade to strengthen their opportunities within the global value chain. For example, it has teamed up with Microsoft to offer certification programmes to independent Indian software vendors to help them comply with international product development requirements (as set by SEI CMM). It has also launched and organized different forums to provide relevant industry information, facilitate exchange of ideas and

Box 3. R&D activities spurring India's IT Industry

Recognizing India's well-established infrastructure for engineering education and research and its location advantages for developing IT businesses, many TNCs have expanded their operations in the country from the initial low-end data processing activities or domestic sales to high-end activities, such as software applications development. Most U.S. and European IT firms have set up software R&D centres in India, and many of them are directly investing in and collaborating with local universities and research institutions to provide joint engineer training programmes. For instance, Texas Instruments, the first TNC to locate their 100 per cent export oriented unit in Bangalore, has funded the establishment of research labs in a wide range of universities and has been directly involved in designing and upgrading the universities' curriculum on engineering education; HP has built a strong link with the IIIT in Bangalore, funding research labs (e.g. IMS and cluster computing); Oracle, in collaboration with IBM and Motorola were directly involved in the setting up of the IIIT in Hyderabad; Microsoft has funded research projects in various IIITs and has been involved in their course development, and it regularly delivers technical training and organizes seminars to train small software vendors for spreading the use of its platforms; Cisco has collaborated with the government and some educational institutions to set up a number of regional networking academies throughout the country to provide IT training to a larger segment of the population.

Many TNCs have also established partnerships with local leading firms. Microsoft, for example, has collaborative arrangements with almost all the leading Indian firms. Nortell entered the Indian market through a joint R&D collaboration with large Indian firms, including TCS, Infosys, Wipro and Silicon Automation Systems. Cisco entered the market through a partnership with Wipro and HCL. While the former has later established its own affiliate, the latter continues its local partnerships for product development purposes. Joint ventures and partnerships with leading foreign TNCs not only enhance Indian firms' market image and provide them with access to the international market, but also enable state-of-the-art technology transfer and absorption for strengthening these Indian firms' own technological capabilities to develop sophisticated products for the world market.

Source: Balatchandirane, 2007.

identify issues related to marketing, branding, investment and intellectual property rights. These forums provide an interactive platform for Indian companies to interact with leading firms and industry experts to acquire knowledge and share best practices (Nasscom, 2007).

6. Lessons learned and recommendations

Overall, case studies of the automotive and IT sectors show that the Indian government, both at the federal and State/regional level, has played a fundamental role in shaping the overall direction of industrial development of the country through the formulation and implementation of a coherent policy framework, the establishment of corresponding infrastructure and instruments and the inducement of a shared commitment of all parties concerned. In particular, the State governments have been instrumental in engaging the industry as well as local academic institutions in special task forces, commissions, trade promotion schemes and consultation committees in defining industrial strategies and recommendations. Such open-dialogue and industry-friendly approach helped not only to derive practical measures that meet industrial needs, but to obtain the wholehearted commitment of the industry to support their implementation.

A series of key success factors, illustrated below, can be identified to explain India's experience in attracting FDI and promoting business linkages with local enterprises, especially at the cluster level. These are: sustained investment in education and research infrastructure; the design of targeted policies and support measures to develop strategic industrial sectors; the proactive role of the Government in the creation of a critical mass of vibrant and entrepreneurial SME suppliers, which played a key role in motivating TNCs to forge business linkages with indigenous firms for mutual growth; the emphasis given to cluster development strategies and the relevance attached to the creation of public-private sector partnerships.

Investing in education and research infrastructure

- The rise of relatively advanced high tech industries, namely automotive and IT, but also biotechnology - can be ascribed to the country's strong engagement in higher education, with a special attention to science and engineering-oriented infrastructure and skills training. A rich endowment in human and technological capabilities allowed the country to attract foreign TNCs and to divert FDI from other regions. The Indian government took a proactive approach, especially at the State level, in that it identified key industrial priorities and endeavoured to invest in related education and research infrastructure, thereby providing TNCs with increased incentives to expand and upgrade their operations in the country and deepen local

linkages. The interplay between private, public and academic institutions proved to be fundamental to build a favourable business environment that offers better access to skilled labour, knowledge, entrepreneurial culture and specialized services.

Introducing FDI targeted policies and support measures

- In order to attract FDI and enhance economic development in strategic sectors, specific policies and instruments were designed to fit overall economic development priorities. In particular, the Indian Government identified high potential industrial sectors (the so-called sunrise industries) and catalysed their growth through tailored policies and incentives, such as taxation exemptions, establishment of common facilities and information hubs and tailor made infrastructure. The IT industry's case provides a good example of industrial development planning, with the setting up of a special task force, the NTITSD, able to devise long-term pro-growth strategies and policies at both the national and the State levels. In the automotive sector constraints thwarting FDI inflows were addressed by eliminating the licensing and approvals of all imported manufacturing components, and by implementing the automatic approval for foreign equity investment up to 100 per cent. Moreover, the government provided for credit, fiscal, marketing and managerial support to make the Indian business environment more enticing for foreign investors. By establishing SEZs, the Government was able to offer good-quality infrastructure, attractive fiscal packages at both the Federal and State levels, as well as to simplify procedures for entering and operating in the Indian market.

Supporting domestic SME suppliers

- Through initiatives such as the Micro, Small and Medium Enterprises Development Act and the Ancillary Development Programme, the Indian Government undertook major efforts to remove the major obstacles limiting enterprising initiatives and dynamism, taking into account the different local specificities. It also implemented policies that improved access to finance and loans, and simplified bureaucratic procedures for start-up businesses. The policies further encouraged human resource development, technology modernization, environmental protection, quality management, market promotion and information dissemination. In particular, the Ancillary Development Programme promoted existing industrial activities and raised their competitiveness compared to foreign suppliers by establishing a buyer-supplier networking platform to share key information. The case of the automotive industry shows that restrictive polices such as local content requirements may lead to the formation of initial TNC-SME linkages. In the long run, however, the Government must develop targeted soft policies in parallel with the liberalization of individual industries to promote capacity upgrading of local firms to meet international requirements, sustain and intensify their linkages with TNCs.

Triggering economic growth through cluster development initiatives

- In order to boost economic performance and spread its benefits at the local level, the Indian Government largely centred its industrial strategy on cluster development schemes covering a wide range of sectors. This allowed SMEs to obtain the benefits of agglomeration economies (i.e. economies of scale, spill-over effects or network effects), while reducing infrastructure, communication and distribution costs. The most successful clusters, such as the Chennai automotive sector or the Bangalore IT sector, were those able to rely on two main requirements: a good physical infrastructure and readily available, trained and skilled manpower. The role of State governments proved crucial at the initial stage. They provided efficient infrastructure, common facilities, fiscal and marketing support. They also removed market constraints, such as credit shortages or lack of management skills. After the initial incubation period, State governments were still involved in making the cluster initiative self-sustainable, building the capacity of local associations and strengthening public-private sector partnerships to foster mutual learning and capitalize on spill-over effects.

Stimulating public-private sector partnerships

- The case studies reveal that the existence of an active and lively plurality of social and economic players – research centres, universities, non governmental associations and private company consortia – were crucial to widespread economic growth at the local level. In particular, proactive and widely recognized industrial organizations, such as Nasscom in India's IT industry, or ACMA in the automotive industry, have been influential in enabling public-private partnerships, inter-firm collaboration within the local industry, as well as cooperation between cross-country counterpart organizations in promoting foreign and domestic linkage development. Nasscom and ACMA experiences also give some key examples of factors contributing to coordinate industrial initiatives into collective efforts that create synergies and opportunities for enhancing industrial development. For instance, Nasscom could act as a clear focal point/reference point for IT domestic firms, relying on its well diversified base and that it is integrated in the Indian business environment. On the other hand, ACMA, operating both at the national and regional level, facilitated cooperation among stakeholders in the auto component sector through its extensive database and the organization of several buyer-seller meetings, trade fairs, and seminars and lectures.

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Chapter IV

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN MALAYSIA[37]

1. Introduction

This chapter examines the role of FDI in developing world class domestic firms in Malaysia, through the creation of business linkages between TNCs and domestic SMEs. It identifies some key factors that contributed to increased inflows of FDI into the manufacturing sector in general, particularly in electronics. This chapter further looks at the strategies implemented for several decades by the Malaysian Government to stimulate the upgrading of local SMEs and the formation of business linkages between TNCs and SMEs.

Upgrading SMEs represents a particularly relevant issue in the case of Malaysia, considering that the current goal of the Government is to transform the country into a technology leader by creating a critical mass of competitive domestic firms. In order to achieve this goal, given the high number of foreign affiliates (about 15,000 firms, World Investment Report, 1997) located in Malaysia, it is crucial to entice domestic firms, especially SMEs, to acquire and develop advanced technologies and integrate successfully into global production networks through linkages with established affiliates.

The first three sections present a general overview of the economic performance and an illustration of recent FDI trends in Malaysia. The fourth section illustrates the measures undertaken by the Malaysian Government to improve the business and investment climate, to attract FDI strategically, to increase the local absorptive capacity and to create TNC-SME linkages. The fifth section provides concrete insights on the development of business linkages in two main electronics manufacturing hubs - Penang and the Klang Valley. Finally, the last section highlights the lessons learned from the Malaysian case.

2. Economic backdrop

The Malaysian economy has grown rapidly over the last four decades. As shown Table 1, Malaysia's economy sustained an average annual growth rate of real gross domestic product (GDP) above five percent between 1970 and 2005. The Economist Intelligence Unit forecasts that real GDP will grow by 5.8 per cent in both 2008 and 2009. As a result, the GDP per capita grew from $315 to $5,098 between 1970 and 2005. In addition to a rapid and sustainable economic growth, Malaysia also achieved a relatively better distribution of wealth. The number of people classified as poor dropped from 4.1 million (37 per cent) to about 2.2 million (14 per cent) between 1973 and 1987. This improvement was a significant achievement in wealth creation and distribution in less than two decades (World Bank, 2007).

Table 1. Annual average growth rates of real gross domestic product

	1970 - 1980	1980 - 1985	1985 - 1990	1990 - 1995	1995 - 2000	2000 - 2005
India	-	5.3	6.6	5.3	5.8	6.7
Malaysia	8.6	5.5	7.0	9.4	3.7	4.8
Mexico	6.4	1.1	1.9	2.0	5.4	1.9
South Africa	3.1	1.1	2.1	0.8	2.5	3.6
Uganda	-1.5	2.7	6.1	7.4	6.7	5.7

Source: UNCTAD Handbook of Statistics, 2007.

For more than 20 years, Malaysia managed to maintain low inflation rates and a stable exchange regime. Even during the Asian financial crisis, Malaysia experienced a smaller rise in inflation than some of its neighbouring countries. For example, between 1997 and 1998 Malaysia's annual inflation rate rose from 2.7 per cent to 5.3 per cent, while it rose from 11.6 per cent to 78.1 per cent in Indonesia and increased from 5.7 per cent to 11.2 per cent in the Philippines in the same years.

The rapid economic expansion of Malaysia has been driven by a remarkable growth of the manufacturing sector. Data show that its share of GDP rose from 13 per cent to 30 per cent between 1970 and 2006 and the share of manufactured goods in total exports rose from 12 per cent to 81 per cent over the same period (World Bank, 2007). As a result, manufacturing has assumed a dominant position in an economy that was once dependent on agriculture and

[37] This chapter is based on a report prepared for UNCTAD by Prof. Rajah Rasiah, from the Faculty of Economics and Administration, University of Malaya, Kuala Lumpur.

minerals (e.g., tin, timber and rubber). The fastest growing sub-sectors include fabricated metals, paper, petroleum and electronics and electrical products.

Exports also grew rapidly during two main decades, namely between 1970 and 1980 - rising from about $1.7 billion to about $12.9 billion – and between 1986 and 2006 – rising from $13.6 billion to $160 billion. As it will be discussed later, the economic policies pursued during the different periods explain such differences in export growth. In particular, during the second period (2001-2006), export growth has been key to narrow the national deficit from about 5 per cent to 3.5 per cent.

2.1. Overview of SME sector

Malaysia defines SMEs by employment size and turnover in a different manner depending on the sector (table 2). In the manufacturing sector, for example, SMEs are firms with less than 150 employees and an annual turnover of less than RM 25 million (about $7.4 million). Thus, Malaysian SMEs are a bit smaller than SMEs in China (up to 500 employees) or Thailand (up to 200 employees).

Table 2. Definition of SMEs in Malaysia

	Primary Agriculture and services (including Information and Communications Technology)**		Manufacturing (including Agro-Based) & Manufacturing-Related Services	
	Employees	Turnover	Employees	Turnover
Micro	< 5	< RM200,000	< 5	< RM250,000
Small	5 - 19	RM200,000 - RM1 million	5 - 50	RM250,000 - RM10 million
Medium	20 - 50	RM1 million - RM5 million	51 - 150	RM10 million - RM25 million

Source: National SME Development Council, 2007 Report.

SMEs play an important role in the economic and industrial development of Malaysia. According to the Annual Report of the National SME Development Council, in 2006 SMEs accounted for about 56 per cent of total employment, for 99 per cent of registered companies (80 per cent of them micro enterprises) and for 28 per cent of fixed assets. The National SME Development Council (NSDC) has set the target of increasing SMEs' contribution to GDP to 37 per cent, its share of total exports to 22 per cent and for the SME sector to employ over 6.2 million workers by 2010. SMEs account for 96.5 per cent of all enterprises in the manufacturing sectors in other countries though, their productivity was relatively low, with a value added per employee of about RM 14,740 compared to RM 47,830 for large firms. Since the Industrial Linkages Programme was launched a total of 906 Malaysian SMEs have registered with the Small and Medium Industries Development Corporation (SMIDEC).

Malaysian SMEs are concentrated in four main sectors: trading and hospitality (33 per cent), finance (25 per cent), construction (9 per cent) and manufacturing (7 per cent). About 20 per cent of SMEs in the manufacturing sector are involved in electrical and electronics, machinery and transport equipment. SMEs play a pivotal role in production networks of large firms and TNCs, and represent about 93 per cent of domestic manufacturing suppliers. However, the contribution of SMEs to gross output and value added of the manufacturing sector is relatively small. They actually account for about 26 per cent of output and 30 per cent of value added. It is estimated between 2005 and 2006 the SMEs value added grew slightly - from about RM 16,576 million to about RM 17,798 million - while their total output reached RM 88,266 million from about RM 81,990 million (Saleh and Ndubisi, 2006).

3. Recent FDI trends

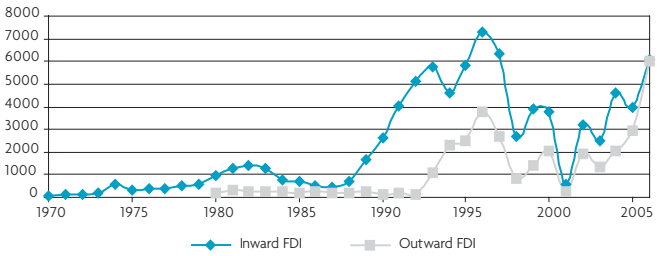
FDI has played a central role in the economic performance of Malaysia and it has been a major driver of export growth. Inward FDI rose from about $934 million to $7.2 billion between 1980 and 1995, to $6 billion in 2005. Consequently, FDI stock as percentage of GDP increased from about 21 per cent to 60 per cent between 1980 and 2002, before falling to 57.2 per cent in 2003 and 36.5 per cent in 2005 (UNCTAD, 2007).

Malaysia is also emerging as a source of FDI. Outflows rose rapidly in the last five years (Figure 1). Increasing liberalization pressures and opportunities to access regional markets[38] via the World Trade Organization (WTO), ASEAN Free Trade Area (AFTA) and the Asia–Pacific Economic Cooperation (APEC) have induced several domestic firms to internationalize their production to cheaper sites, to relocate to countries with a larger domestic market and to follow affiliates of TNCs that have migrated to other countries. For example, Eng Teknology, LKT Engineering and Atlan are among local firms that have internationalized their operations to supply TNCs' affiliates in nearby locations.

Malaysia is a growing source of FDI for other developing countries. Its OFDI stock rose from $2.7 billion in 1990 to $29.7 billion in 2003. The country's annual average OFDI flows increased steadily in 1980-1989, 1990-1994 and 1995-1999. However, annual average OFDI flows dropped to $1.4 billion in 2000-2003 due to the impact of the 1997 Asian financial crisis, the slower pace of economic growth in Malaysia and corporate consolidation. OFDI stock as a percentage of Gross Domestic Product rose from 6.1 in 1990 to 28.8 per cent in 2003, indicating the increased internationalization of Malaysian economy. Large Malaysian enterprises such as Kulim, Kumpulan Guthrie, Sime Darby, UEM, Amsteel Corporation, Genting, Hume Industries, Telekom Malaysia, Malaysian Airline and Malaysian International Shipping

[38] Malaysia is a member of the World Trade Organization (WTO), the ASEAN Free Trade Area (AFTA) and the Asia–Pacific Economic Cooperation (APEC).

Figure 1. Malaysia's FDI trends *(in current $ million)*



Source: National SME Development Council, 2007 Report.

Corporation have significant presence overseas. They were among UNCTAD's top 50 TNCs from developing countries and most of them were government linked companies (GLCs) (UNCTAD 1999, 2001, 2004). Examples of Malaysian SMEs investing abroad include Top Glove, Ingress Corporation and Munchy Food Industries (UNCTAD, 2007).

The electronics industry has been one of the main beneficiaries of FDI in Malaysia. Several major TNCs in the electronics industry, such as Advanced Micro Devices (AMD), Dell, Motorola, Seagate, Texas Instruments, among others, have operations in Malaysia. The number of electronics projects increased proportionally from 11 per cent in 1985 to 22 per cent in 2002 and 2005. As shown in Table 3, until 2006 the electronics industry attracted the largest number of projects and the largest share of total FDI. However, the absolute and relative shares of electronics projects have fallen steadily since 1995 due to the rise of China, Philippines and Indonesia as locations for low cost, labour intensive operations, as well as to the limited availability of skilled manpower.

The main countries of origin of FDI in Malaysia have been different over the years. Overall, Europe, Japan and

Table 3. FDI projects by industry, 2002-2006

Industry	2002		2003		2004		2005		2006	
	No.	%	No.	%	No.	%	No.	%	No.	%
Food Manufacturing	70	9	97	10	74	7	75	7	76	7
Textiles & Textile Products	30	4	34	4	36	3	35	3	30	3
Wood & Wood Products	41	5	37	4	44	4	36	4	41	4
Furniture & Fixtures	37	5	49	5	56	5	55	5	62	6
Paper, Printing & Publishing	17	2	23	2	36	3	23	2	26	2
Chemical & Chemical Products	51	6	44	5	68	6	64	6	149	14
Rubber Products	25	3	21	2	29	3	27	3	37	3
Plastic Products	58	7	82	8	87	8	81	8	85	8
Fabricated Metal Products	58	7	118	12	140	13	115	11	123	11
Machinery Manufacturing	84	11	79	8	80	7	85	8	102	9
Electronics & Electrical Products	178	22	185	19	195	18	227	22	170	16
Transport Equipment	49	6	86	9	108	10	62	6	66	6

Source: MIDA statistics (2007), Malaysia.

Table 4. Percentage of FDI inflows by place of origin, 2002-2006 (% of value)

	2002	2003	2003	2004	2005	2006
United States	23.1	13.9	8.1	28.8	12.2	17.3
Japan	5.1	11.2	7.7	20.5	21.8	14.0
Germany	43.7	1.1	35.9	2.2	1.1	13.5
Singapore	8.8	7.8	11.5	16.3	9.3	10.9
Netherlands	5.2	2.0	0.8	9.4	16.2	7.6
United Kingdom	1.5	24.7	1.2	0.6	3.2	6.3
United Arab Emirates	0.0	25.3	-	-	0.2	5.1
Australia	0.9	0.7	0.9	0.9	12.7	3.9
Korea, Republic of	3.2	2.9	2.5	3.8	2.2	2.9
Taiwan Province of China	2.2	4.0	3.2	2.4	2.0	2.7
Cayman Islands	0.6	0.0	0.4	0.9	4.3	1.5
India	0.2	0.3	2.2	3.1	0.0	1.2
British Virgin Islands	0.4	0.2	1.1	0.1	3.2	1.1
Switzerland	0.2	0.1	0.9	3.1	0.2	1.0
China	0.5	1.6	1.4	0.2	0.7	0.8
Total share	95.5	95.8	77.7	92.2	89.3	89.7
Total FDI (RM Million)*	11572.9	15640.4	13150.5	17882.9	20227.9	78474.6

Source: MIDA Statistics 2007, Malaysia.

the United States have been the main sources of FDI into Malaysia (table 4). With a few exceptions, the top four countries (United States, Japan, Germany and Singapore) accounted for over 40 per cent of the total value of investments in the recent past. The investment of United States and German firms has been the highest in absolute value terms. For instance, between 2002 and 2006, the average investment per project of United States and German firms was RM 74 million and RM 143 million, respectively, while that of Japanese and Singaporean firms was RM 23 million and RM 11 million, respectively.

4. The policy framework

The Malaysian economic policy framework can be divided into four broad phases. These phases correspond to four different rounds of import-substitution and export-orientation strategies which characterize the last five decades (table 5). These policies had very different targets, instruments and impact on the Malaysian trade and industrial development.

The first phase (1958-1968) was dominated by import-substitution strategies to encourage the growth of domestic enterprises. Policies largely targeted investment and trade in durable consumer goods and included the creation of industrial estates, the imposition of high tariffs on imported consumer goods to encourage investment into domestic manufacturing, the provision of tax holidays for import-substituting firms and the provision of investment tax credits for employment creation. In the 1960s, FDI in the manufacturing sector accounted for about 50 per cent of the total investment and 13 per cent of GDP. The shift to export-orientation started with the enactment of the Investment Incentives Act of 1968 however its fruits were realized only after the opening of the first free trade zones (FTZ) in 1972.

The second phase (1970-1980) laid emphasis on export-oriented industrialization. Two key legislations – the New Economic Policy (NEP) of 1971 and the Industrial Coordination Act of 1975 - formed the basis of the strategy. Tariff rates were gradually reduced in most industries and export-processing zones were established to stimulate investment and development. In addition, after the enactment of the FTZ Act of 1971 free trade zones (including licensed manufacturing warehouses) were opened in 1972. The investment incentives were also restructured to focus on export growth, and to facilitate investment in labour intensive firms. In particular, firms located in the export-processing zones were exempted from tariffs and corporate taxes for a period of 5-10 years.[39] Firms exporting at least 80 percent of output were exempted from all Bumiputera equity restrictions. Economic policies designed to favour Bumiputras were implemented in the 1970s to ensure the participation of indigenous ethnic groups in the economy, reserving, among others, a share of corporate equity comprising at least 30 per cent of the total.

The third phase (1980-1985) focussed on import-substitution measures for heavy industries. Unlike in the early first phase, import-substitution policies targeted heavy industries such as automobiles, iron and steel, petrochemical and cement, among others. Tariff protection measures and import restrictions were introduced in these industries. On average, tariff barriers nearly tripled (from about 25 per cent in the 1970s to about 70 per cent in the early 1980s). The main focus of the third phase was to move Malaysia into heavy industrial manufacturing. However, the strong economic recession of the mid-1980s (1985-1987) negatively affected the results.

The current phase (1986 to date), following the economic crisis of 1985-1987, reverted to export promotion. With the domestic economy facing negative savings, mounting debt and deflation in the mid-1980s, the potential offered by a second wave of export-oriented TNCs was seen as a promising solution. As a result, tariffs were reduced, quantitative restrictions on imports were eliminated and various incentives were introduced to attract export-oriented TNCs. Further tariff reductions and liberalization of trade were driven by the Asian Free Trade Agreement (AFTA) and by a series of bilateral investment agreements with key trade partners. However, in heavy industries Malaysia has continued to pursue both export-growth and import-substitution industrial policies.

[39] Pioneer tax holiday and investment tax allowance incentives were the most important. These incentives have often been renewed and readjusted.

Table 5. Industrial Strategies, Malaysia, 1958-to date

Phases	Trade Orientation	Period of Dominance	Policy Instruments
Phase 1	Import Substitution	1958-1970	Pioneer Industries Ordinance,1958 Investment Incentives Act, 1968
Phase 2	Export Orientation	1970-1980	Free Trade Zone Act, 1971 New Economic Policy (NEP), 1971 Industrial Coordination Act, 1975
Phase 3	Import Substitution	1980-1985	Heavy Industries Corporation of Malaysia (HICOM), 1980
Phase 4	Export Orientation	1985-to date	Industrial Master Plans, 1986 and 1996 (IMP1) Promotion of Investment Act, 1986 Action Plan for Industrial Technology Development (APITD), 1990

Source: Rasiah (2005).

4.1. Improving the business and the investment climate

Malaysia has a favourable investment environment which includes such factors as political and social stability, supportive government policies, available and qualified labour, competitive cost structures, excellent infrastructure, quality of life, and a generally good standard of living.

The country's strengths are represented by three key factors: an efficient credit market, a protective environment for foreign investors, and a progressive openness to international trade.

After the financial crisis that hit the country in 1997, significant efforts were made to improve the Malaysian economic resilience. A more comprehensive and efficient banking and credit registry system are now serving the needs of a rapidly industrialising economy facing an increasingly competitive international environment. Funds are mainly provided by commercial banks and other financial institutions such as finance companies, merchant banks and discount houses. A separate and prosperous Islamic banking system has developed under the "Perbankan Islam" Scheme, since the Government Investment Act in 1983. Additionally, development finance institutions, which are primarily formed to provide funds for the development of manufacturing and agricultural sectors, are complementing efficiently the mainstream banking system.

According to the 2007 World Bank Doing Business Report, it ranks 24th out of 178 countries. With regard to investor protection, Malaysia is placed fourth in the Doing Business' ranking. Investors are protected by three important mechanisms: the Federal Constitution by virtue of Article 13, which guarantees against expropriation of property without compensation; the Convention on the Settlement of Investment Disputes, which provides international conciliation or arbitration through the International Centre for Settlement of Investment Disputes located at IBRD's principal office in Washington; and the Kuala Lumpur Regional Centre for Arbitration, which provides a system for settlement of disputes for parties engaged in trade, commerce and investment with and within the region, including administrative and support services, such as secretarial, interpretation and other assistance for the holding of arbitration, conciliation, or domain name dispute resolution proceedings.

Malaysia has also adopted a set of policies aimed to further liberalize its relatively open trade and investment regime. In particular, the Government is currently focusing on the following objectives: improving market access for exports of primary commodities, manufactured products and, increasingly, services; developing and promoting exports of higher value-added manufactures; expanding trade with major trading partners; diversifying trade into non-traditional markets, particularly developing countries; fostering trade and economic cooperation within ASEAN and expanding bilateral trade and investment links within the Asia-Pacific region (WTO 2006). The "Doing Business" Index on "Trade Across Boards" shows that the costs of importation and exportation to and from Malaysia are favourably low, especially in respect to customs clearance, inland transportation, and port and terminal handling (Doing Business 2007). Indeed, imports and exports of goods, respectively, were on average equivalent to 86 per cent and 110 per cent of GDP, respectively, during the period 2001-2005 (WTO 2006).

Nevertheless, several weak points must be addressed in order to further improve the business environment, ranging from the release of licences to contract enforcement and the facilitation of business start-up. Malaysia's economic slowdown in the beginning of 2000 showed the problems associated with over-reliance on an export-led growth strategy and the consequent vulnerability to industrial countries' business cycle. To address this issue, measures have been taken to develop new sources of growth, whereby agriculture, resource-based industries, high-technology manufacturing and services have been given higher prominence in order to improve the economy's competitiveness and resilience to shocks (WTO, 2006). One of Malaysia's major pull factors is its large pool of young, educated and trainable workforce. Many of Malaysia's university graduates are trained overseas in fields such as engineering, and accountancy, allowing them to adapt easily to an international corporate environment.

However, Malaysia's graduate numbers are insufficient, creating labour shortages in the knowledge-based sectors that the Government wants to become the basis of its future economy. To cope with the manufacturing sector's demand for technically trained workers, the Government has taken measures to increase the number of engineers, technicians and other skilled personnel graduating each year from local as well as foreign universities, colleges, and technical and industrial training institutions. The Human Resource Development Fund (HRDF), which is aimed at encouraging direct private sector participation in skills development, was launched in 1993 with a grant from government. The HRDF operates on the basis of a levy/grant system. Employers who have contributed to the system qualify for training grants for their Malaysian employees.

The greatest advantage to manufacturers in Malaysia has been the nation's persistent drive to develop and upgrade its infrastructure. The country boasts a network of well-linked highways and railway systems, well-equipped seaports and one of the world's best airports – the Kuala Lumpur International Airport (KLIA). The country also has a high quality telecommunications network and related services ranging from basic telephony to higher end broadband penetration and fibre optic capability.

On 7 February 2007, the Malaysian Government launched the Special Taskforce to Facilitate Business, or PEMUDAH. Among the main tasks set for immediate implementation, the following priorities have been listed: to review the status of the public services delivery system in terms of processes, procedures, legislation and human resources with a view to introducing improvements; to study best practices in the private sector that can be

adopted by the public sector; to coordinate programmes across public sector agencies towards enhancing Malaysian competitiveness; and to monitor the implementation of policies, strategies and procedures aimed towards improving the efficiency and effectiveness of the public delivery system (PEMUDAH website).

Overall, thanks to the three key factors identified above, Malaysia has emerged as an increasingly attractive destination for FDI. This has been possible also thanks to the depreciation of the local currency in 1986, which made the country more competitive in business. External factors also played a key role. In particular, the Plaza Accord of 1985 led to the appreciation of the Japanese yen and of the currencies of Asian Newly Industrialized Economies (NIEs)[40] against the United States dollar, while the Malaysian currency depreciated. Furthermore, the withdrawal of a Generalized System of Preferences from Asian NIEs in 1988 reduced access of firms to their markets. These factors increased the production costs of firms in NIEs and led to a massive inflow of FDI into other Southeast Asian countries, including Malaysia (Rasiah, 1988; Henderson, 1989).

It should be noted that FDI has traditionally played a major role in Malaysia's industrialization plans, with the exception of the period from 1981-85 and with a special emphasis on the current development phase (1986-to date). In the early 1990s, the Malaysian Government simplified the foreign investment approval process to further facilitate FDI flows and allowed the extension of the existing five year tax relief for a further five years to stimulate re-investment by TNCs. In addition to tax and tariff holidays, the Government also offered double deductions on export credit in order to encourage exports growth. This scheme allowed exporters to gain greater access to credit at a subsidized interest rate (four percent) prior to or upon shipment of products.[41] Finally, the Government introduced substantial tariff reforms in the domestic market, in view of promoting the development of light industries such as textiles, garments and electronics. Given the small domestic market, TNCs in these industries were granted financial incentives, tariff-free operations to import and export, guarantees against unionization of workers and the right to tax-free repatriation of profits.

4.2. Attracting FDI strategically

Malaysia has offered large incentives to attract FDI into sectors that it regarded as strategic for over two decades. In particular, since the 1990s the Government has targeted a number of economic sectors for incentives, mainly high-technology companies, Islamic financial services, biotechnology firms, tourism, automotive component manufacturers, manufacturers of specialised machinery and equipment, exporters and operational headquarters. In Malaysia, many tax and non-tax incentives may be granted to a promoted investment. These include exemption from income tax for "the pioneer status" company, an investment tax allowance, a reinvestment allowance, an export credit refinancing scheme, double deduction of export credit reinsurance premiums, double deduction for promotion of exports, and an industrial building allowance. There are also packages of incentives granted to research and development in industry. There are various allowances and deductions as well as tax exemptions. Other incentives are deduction for capital expenditure on approved agricultural projects, incentives for the tourism industry, and tariff protection.

To facilitate manufacturing development, the Government has created over 200 industrial estates and 14 free trade zones (Giroud, 2003). In addition, in manufacturing industries, exemption from import duty on raw materials, machinery, components; drawback of excise duty on parts, ingredients or packaging materials; drawback of sales tax on materials used in manufacture; exemption from import duty and sales tax on machinery and equipment, as well as drawback of import duty, are granted.

Hi-tech industries and R&D activities are not only encouraged through incentives. They are also facilitated by improved infrastructure, science parks and institutions that were created to stimulate technology upgrading and innovation. Among others, the following institutions were established: the Malaysian Institute of Microelectronics Systems in 1991, the Malaysian Technology Development Corporation in 1992, the Malaysia Industry-Government High Technology Group in 1993, and the Multimedia Super Corridor and the Multimedia Development Corporation in 1997. Some of these initiatives have been very successful in attracting FDI strategically, particularly the Multimedia Super Corridor (MSC). The MSC is a zone that encompasses Kuala Lumpur and five key infrastructural projects:

- Petronas Twin Towers;
- Putrajaya (new government administrative capital);
- Cyberjaya ('intelligent' research and development city);
- Technology Park Malaysia; and
- KL Tower.

There are eight MSC Flagship Applications and three rollout phases over a 20-year timeframe. The MSC aims to attract world-class multimedia companies to establish research and development facilities with a Bill of Guarantees and incentives for MSC-status companies. In addition, the establishment of smart schools are one of the flagship applications. This initiative responds to the Government's vision to create a technologically literate workforce. These schools will apply information technology to various aspects of schooling such as teaching, learning, staff training and management.

In order to attract efficiency-seeking FDI, the Malaysian Government also introduced a number of instruments to make the manufacturing sector more innovative, dynamic and technologically competitive, and to increase the value added of assembling operations. It launched the Action Plan for Industrial Technology Development in 1990, the Human Resource Development Act in 1992, and the Second Industrial Master Plan in 1996. In particular, the Second Industrial

[40] NIEs include Hong Kong, China; Taiwan, Province of China; Singapore; and the Republic of Korea.

[41] The eligibility criteria for double deduction included the following: expenses incurred on publicity and media advertisements, provision of samples to prospective customers including preparation of tenders, participation at trade fairs or industrial exhibitions, and costs incurred to maintain sales offices overseas for the promotion of exports.

Master Plan (IMP2) included the Investment Promotion Act, which recommended the consolidation of fiscal incentives to promote FDI. The Second Industrial Master Plan had the following objectives:

- To encourage TNCs to shift sophisticated operations to their affiliates in Malaysia;
- To strengthen supply chains through upgrading of local firms;
- To promote technology acquisition and enable Malaysia to move up the technological ladder;
- To develop the information technology and multimedia industry; and
- To stimulate the growth of domestic world-class firms.

In order to achieve these goals, the plan provided a long-term strategy for the development of specific sub-sectors and target areas. In particular, 12 subsectors were given high priority status, of which seven were resource-based industries. The resource-based industries were: food processing, rubber, palm-oil, wood-based, chemical and petrochemical, non-ferrous metal products, and non-metallic mineral products. The others included: electrical machinery, transport equipment, machinery and engineering products, ferrous metal, and apparel.

The Second Industrial Master Plan was followed in 2006 by the Third Industrial Master Plan (IMP3), which aims at achieving long-term competitiveness through the transformation and innovation of the manufacturing sector and the prioritization of the same twelve industries (box 1). As the previous one, also the current plan seeks to use the FDI platform as a strategic driver of growth. Its specific targets include achieving 5.8 percent and 7.8 percent annual growth of the manufacturing and service sectors by 2020, as well as increasing exports to RM 1.4 trillion and total factor productivity growth by 2.6 percent (IMP3, 2007).

4.3. Strengthening the absorptive capacity

SME development has been a major component of government industrialization policies. Government support for SMEs can be traced back to the rural industrial development strategies of the 1950s. The first attempts to coordinate SME promotion activities on a national scale began in 1986, with the launch of the First Industrial Master Plan (IMP1). This plan set the policies and programmes for integrating SMEs into international supply chains through technological deepening and clustering. A specialized unit to coordinate SME activities on a national scale, called the **Small and Medium Industries Development (SMIDEC),** was created in the early 1990s, while the **Small and Medium Industrial Development Plan** was launched in 2000 under the Second Industrial Master Plan (IMP2). SMEs incorporated in Malaysia with shareholders' funds of up to M$500,000 and at least 60 per cent Malaysian equity qualify for pioneer status with a tax exemption of 100 per cent of income. To qualify for the incentive, the company has to be active in a promoted sector and comply with either of the following criteria: (1) the value added must be at least 15 per cent or (2) the project must contribute to the socio-economic development of the rural population.

Although most Malaysian SMEs are dependent on the local market for the sale of their products, about 26 per cent of SMEs export their products abroad. In the past, the Malaysian Government has launched a number of measures to increase the export competitiveness of local SMEs. For example, the **Market Development Grant Scheme** provides support to SMEs to participate in international trade fairs or trade missions, and to display their products in Malaysia Trade Centres overseas. Traditionally, however, the most prevalent form of financial assistance to SMEs has been the provision of government-subsidized credit channelled by financial institutions and commercial banks. For example, **Bank Negara Malaysia** has played an important role in regulating financial assistance to the SMEs by offering lower lending rates than market rates. Additionally, most financial institutions in Malaysia have established SME Departments to meet SME financial needs. In addition, the Credit Guarantee Corporation provides guarantee to commercial banks supplying credit to SMEs for viable projects.

In the 1990s, the Government made available funds for venture capital through the establishment of Government-owned venture capital institutions, such as the **Malaysian Technology Development Corporation**. A survey carried out by SMIDEC in 2005 revealed that Malaysian SMEs mostly rely on traditional sources of finance (i.e. own funds or retained earnings) and commercial banks. It also revealed that the general environment for accessing funding in Malaysia was regarded as excellent. Not only have interest rates in Malaysia hovered below five percent in the period 1998-2005, but also special central government conditions have ensured that commercial banks lent a significant share of their funds to SMEs on an on-going basis.

Studies by MITI (1996) have rather identified limited technology and innovation capabilities as the main constraints hindering the growth of local SMEs. The main initiative for stimulating the innovative capabilities of domestic firms is the **Commercialization of Research and Development Fund,** which offers assistance to SMEs willing to link up with universities and research institutions and commercialize the research output. SMIDEC has been also successful in stimulating technical change through a number of grants, such as the Grant for Product and Process Improvement (ITAF 2), the Grant for Productivity and Quality Improvement and Certification (ITAF 3), the Technology Acquisition Fund and the Technology Acquisition Fund for Women.

Box. 1. The Ninth Malaysia Plan (2006-2010) and Third Industrial Master Plan (2006-2020)

The Ninth Malaysia Plan (9MP) foresees developing a competitive, innovative and technologically strong SME sector that is able to contribute to the domestic economy and compete globally (SMIBD 2008). Strategies will be directed at acquiring technologies to propel SMEs up the value chain in the manufacturing, agriculture, and services sector through outsourcing, inter-firm linkages, entrepreneurship programmes, and development of technical skills. The biggest share of the development budget will go to education and training, for which the government has allocated M$41.1bn (one-fifth of total spending) for 2006–2010 (EIU, Country Report, May 2008). These strategies include:

Outsourcing: Programmes will be implemented to nurture SMEs as Research and Development (R&D) partners. Collaborative ventures among Transnational Corporations (TNCs), Government-linked companies (GLCs) and SMEs will facilitate technology transfer and skills development and marketing;

Inter-firm linkages: Creating business links between SMEs, GLCs and TNCs would enable SMEs to be more competitive and become reliable suppliers for global outsourcing networks which would expand Malaysia's trade with new export markets;

Entrepreneurship programmes: Programmes, including advisory and outreach services, will be expanded to equip SMEs with new and improved management and business practices, methods in production, quality improvement, marketing and distribution; and

Knowledge skills: Further development of technical skills amongst SMEs, especially in generating innovation and creating economic value from knowledge application.

In August 2006 the Government presented the Third Industrial Master Plan, which serves as a guide for the country's economic development for 2006–2020. The plan has targeted 12 subsectors for further development and promotion: electronics, petrochemicals, pharmaceuticals, medical devices, textiles and apparel, transport, machinery and equipment, metals, wood-based products, rubber and rubber products, oil-palm-based products and food processing. Manufacturing is forecast to expand by about 6 per cent annually during the plan's period and to contribute about 29 per cent to GDP by 2020. The service sector is projected to expand by 7.5 per cent annually and to increase its contribution to GDP from 51 per cent in 2005 to 60 per cent in 2020 (EIU, Country Report, May 2008). The Plan also envisages that SMEs will contribute significantly to the realisation of the long term business and industrial competitiveness of the country by enhancing the competitiveness of SMEs; capitalising on outward investment opportunities; driving the growth of SMEs through technology, knowledge and innovation; instituting a more cohesive policy and supportive regulatory and institutional framework; and enhancing the growth and contribution of SMEs in the services sector (SMIBD, 2008).

Table 6. SME industrial estates by acreage and establishments, 2005

States	Industrial Estates	Acres	Firms
Selangor	Bandar Sultan Sulaiman	40	59
Malacca	Masjid Tanah	57	89
Johor	Bandar Sri Alam	103	184
Sarawak	Samajaya Free Industrial Zone`	7.81	16
Terengganu	Teluk Kalong	50	41
Kedah	Sungei Petani	88	91
Perak	Kuala Kangsar	101	-na-
Kuala Lumpur	Mukim Batu	55.7	390

Source: SMIDEC SME Information & Advisory Centre (unpublished).

In order to reduce the shortage of skilled workforce, in 1986 the Second Industrial Master Plan launched several programmes to raise training and skills development to upgrade the SME sector, with the constant involvement of TNCs. For example, in 1988 it introduced the Double Deduction Training Scheme, under which firms could claim double deduction on approved training expenses from their taxable income. In 1992 it promulgated the Human Resource Development Act, under which manufacturing firms with more than 50 employees were imposed a mandatory levy of one percent of their payroll, which the firms could reclaim against certified training expenses. The levy was collected and administered by the Human Resource Development Council (HRDC), which was created in 1993.

Finally, the Government developed several industrial sites to meet the needs of SMEs, offering strategic location advantages and adequate infrastructure. The programme

involved the creation of common facilities for waste disposal, warehousing and employees' accommodation, and building factories at an affordable price for SMEs. The location of the industrial sites was chosen in close proximity with TNCs. In 2005, there were 1,271 SMEs located in eight main industrial estates, with an overall occupancy rate of 69 per cent (table 6).

4.4. Creating TNC-SME linkages

With the broader objective of stimulating the growth of SMEs, the Malaysian Government promoted TNC-SME linkages under both the First and the Second Industrial Master Plan. Under the First Industrial Master Plan (1986-1995), SMEs were strongly encouraged to connect and supply TNCs through match-making events and incentives for skills development and upgrading. On the other side, TNCs were encouraged to source inputs from local suppliers through the **Subcontractor Exchange Programme and the Vendor Development Programme,** launched in the late 1980s. The former aimed at stimulating export-oriented TNCs to source from local firms. The latter explicitly targeted the domestic carmaker Proton to spawn indigenous suppliers. Under the Second Industrial Master Plan (1996-2005) the Government further encouraged TNCs to deepen sourcing from local enterprises through a series of targeted programmes aimed at:

- Assisting SMEs to overcome size and scale constraints;
- Minimizing difficulties of accessing information for business and investment decisions;
- Reaping benefits from research and development; and
- Promoting inter-industry linkages.

In order to achieve these goals, SMIDEC launched the Industrial Linkage Programme, the Global Supplier Programme, the Factory Audit Scheme, the Annual Showcase, the Enterprise 50 Programme, the SME Expert Advisory Panel. These programmes were introduced to encourage SMEs to form strategic alliances with large TNCs, as a way of enabling them to benefit from networking, technology, training and market access. For example, SMEs participating in the Industrial Linkage Programme (table 7) and the Global Supplier Programme (table 8) were able to experience the benefits from collaborating with TNCs in production, marketing and R&D activities. To encourage TNCs to participate, 100 per cent of expenditures incurred in training employees, developing and testing local products, improving the quality of local inputs or innovating the facilities of local SME partners, were declared deductible from income tax. To encourage SMEs to upgrade and meet world-class standards in terms of price, quality and production capacity, the Government introduced the "pioneer status". In this system, eligible small companies were entitled to a tax exemption of 100 per cent of statutory income for a period of ten years and to an investment tax allowance of 60 per cent (or 100 per cent in industrial sites) on the capital expenditure incurred within a period of five years.

In addition, the Malaysian Government has developed a range of innovative skill development programmes that try to integrate Malaysian SMEs into global supply chains. The **Penang Skills Development Centre** – a joint initiative of

Table 7. The Industrial Linkages Programme (ILP)

Assistance	ILP is a set of cluster-based industrial development programmes comprising Fiscal Incentives (Pioneer Status with 100% tax exemption for 5 years, or Investment Tax Allowance of 60% on qualifying capital expenditures incurred within a period of 5 years). Business Matching. Programmes that support industrial linkages such as technology development, skills upgrading, export and market development, and provision of SME industrial sites.
Goal	ILP encourages large companies to source parts, components and services from SMEs. Intended to promote and nurture local SMEs to become reliable and competitive manufactures and suppliers to leading industries.
Delivery	SMIDEC administers and coordinates the ILP programmes Targeted at electrical and electronics (E&E), transport equipment, machinery and engineering, and resource based manufacturing SMEs .SMEs must manufacture items in the "Promoted List" and supply to lead companies. Lead companies can claim expenses incurred in developing SMEs including training, factory auditing and technical assistance to ensure the quality of vendors' products.

Source: SMIDEC.

Table 8. The Global Supplier Programme (GSP)

Assistance	The GSP involves: Training in critical skills Linkages with large companies/MNCs Certification of product
Goal	Proactive approach by government to further enhance the capacity and capability of SMEs to provide world-class service and products to large corporations (TNCs) in their operations worldwide. Focus on reducing cost and cycle time
Delivery	Example: Tesco as a Customer SMIDEC actively promotes links between Tesco and SME by providing funding for certification of product and technology to link to Tesco's supplier systems. Grant for Productivity and Quality Improvement and Certification (Matching grant max. RM 250,000) Grant for Product and Process Improvement (Matching grant max. RM 500,000) Factory Auditing Scheme (Diagnostic audit for SMEs with potential to be linked to MNCs under ILP

Source: SMIDEC.

Table 9. Training and grants used to develop SME suppliers, 2003

Skill Development Centers	Amount Grant Utilised (RM)	Number of Employees Trained
Kedah Industrial Skills and Development Center (KISMEC)	192,000	119
Johor Skills Development Centre (JSDC)	90,307	79
Selangor Human Resource Development Center (SHRDC)	118,640	216
Sarawak Skills Development Center (ppks)	4,060	11
Perak Entrepreneur and Skills Development Centre (PESDC)	39,146	66
Penang Skills Development Center (PSDC)	93,370	119
Pahang Skills Development Center (PSDC)	38,120	52
Malaysia-France Institute (MFI)	233,922	108
German-Malaysia Institute (GMI)	29,812	34
Terengganu Advanced Technical Institute (TATI)	131,797.70	90
Negeri Sembilan Skills Development Centre (NSSDC)	153,252	329
Malacca Industrial Skills Development Institute	25,990	24
SIRIM Berhad	19,200	18
Sabah Skills and Technology Centre (SSTC)	11,325	39
Technology Park Malaysia (TPM)	34,500	39
National Institute of Occupational Safety and Health (NIOSH)	1,050	5
National Productivity Centre (NPC)	20,150	59
Malaysia Institute for Nuclear Technology Research (MINT)	6,400	2
IKRAM Training and Infrastructure Development Institute	21,504	24
Total	1,268,545.70	1,433

Source: MITI (2003).

the State of Penang and the private sector – was the first skills development organization. It was created in 1989 to target the creation of TNC-SME linkages by letting TNCs play a primary role in forging the type of training provided to SMEs by the centre. As illustrated in more details in the next section, its success led it to be considered a model to be replicated both in Malaysia and abroad. Table 9 shows that, in 2003, the Malaysian Government invested a total of RM 1,268,545 to train 1,433 employees of domestic SME suppliers, through a network of nineteen skills development centres. The Terengganu Advanced Technical Institute and Selangor Human Resource Development Centre were those that trained the largest number of employees (respectively, 329 and 216 employees per year).

5. Business linkages case studies

This section illustrates the processes, dynamics and forces that helped to connect and coordinate links between TNCs and local firms in Penang and Klang Valley. Both regions enjoyed high FDI inflows in electronics, strong institutional coordination, good basic infrastructure, incentives and large FDI promotional efforts. Despite similar national government interventions, however, different policy initiatives at the local level produced a different impact in terms of linkages and SME upgrading.

5.1. The case of Penang

Penang is a major electrical and electronics manufacturing hub in Malaysia. Its growth began with the establishment of the **Penang Development Corporation** (PDC) in 1969. Penang was the first designated free trade zone that emerged out of the Federal Government's efforts to attract FDI through the introduction of the Free Trade Zone (FTZ) and Licensed Manufacturing Warehouses (LMW) system (an extension of the FTZ benefits outside the designated zones). Since the 1970s, the State Government of Penang and PDC were able to attract a significant number of foreign and domestic investments into the region by coordinating promotion initiatives at the local level. TNCs also played a significant role in driving the increasing contribution of Penang's manufacturing sector to the GDP, and in transforming Penang in one of the largest regional economies in Malaysia.

There were in 2007 more than 3,000 SMEs in Penang, with a significant number having graduated to become global suppliers to the many transnational corporations (TNCs) such as Intel, AMD, HP, Fairchild, Dell, Osram, Agilent Technologies, Motorola, Seagate and Renesas Semiconductor, that have established their manufacturing base in Penang, since the 1970s. Although these numbers have not grown significantly from the late 1990s owing to serious shortages in human resources, established firms continue to make a positive impact on the State's economy and being competent suppliers, these companies have provided an added advantage to draw foreign direct investments to Penang, dubbed as Malaysia's Silicon Island. New firms such as Pentamaster (started in 1991) and Vitrox (established in 2005) manufacture opto-control lenses and automated machinery, have also started their own design centres.

The manufacturing sector of Penang is dominated by electrical and electronics industries. Clarion was Penang's first electronics TNC relocating operations in 1971 followed

by the first American electronics TNC in Penang National Semiconductor. In general, component electronics firms were the first to relocate operations in Penang in the 1970s – examples include AMD, Intel, Motorola, Hewlett Packard, Siemens and Hitachi. Consumer and industrial electronics firms began relocating in Penang on a large scale only after 1985 – e.g. Sony, Toshiba, Acer and Dell. A targeted campaign to woo disk drive companies from 1989 onwards resulted in investments by companies such as Maxtor, Conner Pheripherals, Seagate, Quantum, Komag and Read-Rite. Other key electronics producers, such as Dell, relocated to Penang to strategically customize their product development operations as well as to provide integrated support for their supply chain in the Asia Pacific, including Japan. However, only Seagate, Komag and Quantum among the disk drive firms have maintained operation in Penang since the lack of labour supply drove several disk drive firms away to Thailand and China.

In Penang, TNCs have represented the prime technology suppliers and the main market for local machine tool firms. These SMEs have traditionally enjoyed little federal government support, but have experienced rapid growth since the early 1980s (Rasiah, 2002a). The presence of large TNCs, such as Intel, AMD and Hewlett Packard, promoted the co-location of contract electronics manufacturers (CEMs), thanks to the provision of comprehensive global supply chain management services such as material procurement, product manufacturing and logistics support. The State government and PDC deliberately promoted a multi-tiered supply structure of electronic firms in the region to enhance integration into TNCs' global production networks.[42] In 2006, the electronics sector accounted for over 60 per cent of the national manufactured exports and contributed to over 50 per cent of Penang's manufacturing employment (over 30 per cent of the total national manufacturing employment).

Penang is an island located on the north-west coast of the Malaysian peninsula and enjoys a relatively favourable ethnic homogeneity (of Chinese origin) and a relatively distant relationship with the Federal Government. This distance has favoured a stronger networking and collaborative relationship between the companies and the local government, and has allowed the State government and PDC to play a pivotal intermediary role in creating synergies among local development agencies, business associations, SMEs and TNCs. Since 1985 the State Government and PDC have elaborated a list of local suppliers that is updated on an annual basis. The availability of up-to-date supplier information allowed TNCs to effectively identify potential suppliers. Regular meetings, visits and promotion events have been also organized to match and strengthen linkages between local firms and foreign enterprises.

In particular, the State officials and PDC encouraged the formation of consultation committees and of business councils, with the direct involvement of the local TNC management, in order to promote collective actions for supplier development and local sourcing. For example, PDC was instrumental in developing the capitalization of Globetronics, an indigenous electronic manufacturer, though the Malaysian Technology Development Corporation. It also facilitated the formation of the Penang Photonics Consortium to promote the development of the photonics industry in Penang and to lay the ground for the creation of a photonics cluster by providing one-stop specialized manufacturing services. Thanks to this support, representatives of the consortium could organize trade missions to Taiwan Province of China, share experiences, and develop joint projects. They also attended major conferences abroad, forged linkages with US venture capital funds and benefited from State Government funds for research projects involving local universities and research institutions to raise industrial expertise in photonics (Ernst, 2002).

Providing specialized training through the Penang Skills Development Centre

In response to the demand of TNCs for local skilled workforce, the State government and PDC facilitated the development of the **Penang Skills Development Centre** (PSDC) in 1989, to provide training and suppliers development services. Running as a non-profit organization, PSDC received support by both the Federal and the State government. The Federal Government provided the initial set-up and equipment grants. The set-up grant reached $15,800 per year from 1989 to 1991, and increased to $31,600 per year from 1992 to 1999. The equipment grant reached $1.5 million per year from 1989 to 1994, and increased to $2.2 million from 1995 to 2000, up to $4.2 million from 2001-2005 (Mori, 2005). Similarly, the State Government subsidized land and infrastructure, namely it charged a symbolic rent of RM1 a year for the building, instead of the market rate estimated at RM1 million a year.

PSDC is operated and administered by the industry. Its management council consisted mainly of TNCs representatives. It started with 31 member companies in 1989, of which six were domestic suppliers and 25 were TNCs. By 2005, it had 105 members, of which 52 domestic suppliers and 56 TNCs. In 2000, PSDC launched the **Global Supplier Programme** (later embedded in the Industrial Linkage Programme of the Federal government) which combined two forms of interventions: ad hoc training programmes and targeted business deals with TNCs to upgrade a selected group of local suppliers. The contents of the training programmes designed by TNC representatives have been tailored to meet TNC requirements and market demands. Training participants were rigorously selected based on TNC criteria (Henderson and Phillips, 2007). PSDC also acted as a focal point for information exchange and knowledge transfer between domestic and foreign TNCs, which in many cases maintained their in-house training centres to provide specialized training to their employees.

Since the 1980s, many TNCs (particularly Unites States-based TNCs which dominated the Penang electronics sector) have taken steps to improve their competitiveness in response to increased pressure to reduce production

[42] The chief minister of Penang in the 1980s, Dr Lim Chong Eu and PDC's managing director, Datuk Chet Singh played pivotal roles to promote local supplier networks (See Rasiah, 1994).

Box 2. Intel: pioneer of the smart approach

Intel arrived in Penang in 1974 and was one of the original eight pioneers (Agilent, AMD, Osram, Bosch, Clarion, Hitachi, Fairchild, Intel) attracted to the FTZ by PDC. It currently employs 8,000 workers. Intel's stated objective for supplier development was to demonstrate its commitment to grow Malaysian based suppliers by continuing its efforts to nurture existing and potential new suppliers. Its local managers have crafted a supplier development programme called the "Smart Approach" to achieve this objective. Intel looks for the following four qualities in potential suppliers: Competitiveness: safety, quality, delivery, price; Capability: technical, materials, process; • Stability: vision, finances; • Resourcefulness: management, human resources, training. TNCs such as Intel are in a strong position to choose their partners.

Impact

A number of the SMEs such as LKT Engineering and Eng Teknology which have been through the Intel supplier development programme have become transnationals in their own right. Eng Teknology was recognized by Money Asia as the best SME in Malaysia, and LKT has won numerous awards for product, vendor and supplier excellence. Both SMEs are listed on the Kuala Lumpur stock exchange. Other Intel-driven SMEs include Polytool, Rapid Synergy, Metfab, Prodelcon and Choong Engineering. Through its own employee welfare driven programme, Intel's Managing Director, Lai Pin Yong, launched the firms Shinca, Shintel, Samatech, Unico and Globetronics in the 1990s. Many of these firms were eventually sold for profits (see Rasiah, 2002b). They became, through the smart approach, "best-in-class" technology corporations. At the end of this process, SMEs are able to meet stringent health, safety and environmental standards, are able to respond to multiple and sudden changes, are able to give 24/7 coverage, are competitive from a total cost perspective and are able to support a global network and total solutions. The following critical success factors emerged from the Intel case:

- Long-term commitment by both government and TNCs;
- Targeted FDI strategy to attract TNCs with a positive corporate philosophy and willingness to delegate to local managers to develop linkages;
- Establishment of public-private sector dialogue;
- Formation of meso institutions, i.e. skill centres, such as PSDC;
- Selective rather than indiscriminate support for SMEs;
- Systematic supplier development programmes vs. less structured ones;
- Appropriate use of economic incentives.

Source: UNCTAD (2006), Deepening Development Through Business Linkages. UNCTAD/ITE/TEB/2006/7.

costs and customize products for the growing Asia Pacific market. These challenges encouraged them to engage in greater intra-firm and inter-firm knowledge and technology transfer, to focus on more complex and higher value-added activities, and to increase local outsourcing (Rasiah, 1987; Lim 1991). For example, Intel supported the modernization of local companies such as Eng Technology (box 2). Motorola supported the upgrading of Wong Engineering and the establishment of BCM Electronics, under a technology transfer deal with an indigenous manufacturer, Comintel. In general, Unites States TNCs operated in a more open production network, which created several outsourcing opportunities for local firms and was conducive to local upgrading.

The Global Supplier Programme was largely triggered by Unites States TNCs, and the fact that the local procurement operations of many of these TNCs were managed by Malaysians from the 1980s onwards strengthened their chances to embed in the local economy.

Upgrading SMEs through public-private sector partnerships

In Penang, public-private partnerships and collaborative efforts resulted in an increased number of spin-offs and in the formation of new firms set up by former managers and technical employees of TNCs. For example, Globetronics, Shinca, Shintel and Unico were all established by former Intel employees, while Loshta and BCM Electronics were set up by former employees of Motorola (box 3).

Micro Machining (which was renamed several times – Micro Components and Towam were some of its more

Box 3. Motorola launched BCM in Penang

In tandem with the Malaysian Government's call to partner local companies up the value chain, Motorola initiated and began developing a relationship with local manufacturer BCM. Formerly known as "Bakti Comintel Manufacturing", the company was set up to benefit from Motorola's technology and knowledge transfer, establishing itself as a key local manufacturer and supplier for Motorola components. Motorola helped BCM grow their operations and business, assisting to fast-track BCM's learning cycle through the transfer of experienced personnel to BCM for specialized operations.

Incorporated in September 1993 at Prai Industrial Park, BCM began operations with an initial headcount of 50. Its first manufacturing assembly of 12 models included Portable, Dual-Tone Multi-Frequency (DTMF) and Mobile Mic for Motorola Technology Sdn Bhd. In 1994, BCM introduced its first Surface-Mount Technology (SMT) machine and started front-end manufacturing for these products with sales hitting approximately RM2 million. From 1995 onwards, BCM began shipping the products to Motorola facilities worldwide. Under Motorola's supervision, BCM continued to globalize its operations, maintaining its consistent growth. In 1998, BCM delved into design and development for Motorola; its pilot project model being a backup power supply unit. By the year 2000, BCM had expanded to a headcount of 450 personnel, supporting Motorola's business with more production lines, producing over 200 models, hitting a significant amount of sales for Motorola business. By 2006, BCM co-developed two microphone accessories with Motorola and began mass production in October that same year.

In its continuous efforts to refine BCM's core competencies, Motorola relished the role of developing BCM in almost every aspect of contract manufacturing, beginning from manufacturing and engineering to quality assurance, planning, purchasing and shipping. Motorola was instrumental in providing the necessary development via training or the transfer of actual manpower to BCM. BCM has since established itself as one of Motorola's top three suppliers in terms of cost, quality and delivery. The various technologies and expertise imparted by Motorola were crucial in developing BCM into a respected contract manufacturer on the global market. Among the technologies adopted from Motorola's guidance are assembly process, surface mount, testing (analog, radio frequency, and audio), sourcing, planning and technical operations.

Reflecting its immense success, BCM has grown in 2007 to a $70 million company in terms of export sales per annum. From a single customer in Motorola, BCM now supplies to many reputable customers all over the world and employs over 1,200 employees – surpassing the Small-Medium Industry status since 1999. Having gone full circle, BCM has also overseen the development of several local suppliers in the supply chain, an ongoing journey to raise Malaysian companies to global prominence.

Source: Motorola Malaysia.

recent names) trained many of Penang's engineers in precision engineering and metal working technology and its former employees founded a number of local firms such as Prodelcon, Polytool, Rapid Synergy and Metfab. Many employees moved out to help start and support new firm creation in Penang.

These new firms strengthened the local supplier base and provided specialized and complementary services to TNCs, intensifying product differentiation and the integration of indigenous firms in the global production networks of TNCs.

Since the 1980s, the share of local procurement by TNCs has risen steadily in Penang. It was 10 to 15 per cent in the early 1980s and rose to 20 per cent in the late 1980s (Mori, 2005:53). In 1996, TNCs sourced 46 per cent of their inputs locally (Narayanan 1997: 23). For example, the local procurement ratio of Sony-Malaysia was reported to be about 30-40 per cent on average, and included inputs such as plastic, metal and mechanical parts that were initially imported (Mori, 2006). TNCs like Intel, AMD, Fairchild and Hewlett Packard subcontracted part of their production to a number of local suppliers of relatively high technological capabilities, such as Globetronics, Unisem and Carsem. Other TNCs, such as Motorola, relocated higher value-added activities to Penang, such as the design of a cordless telephone. In order to do that, the Motorola R&D centre went from four engineers in the 1980s to 120 in 1996 and 1500 in 2007.[43] The centre was responsible for new product design, product-process interface and advanced manufacturing.

Evidence shows that most local firms that were successfully upgraded to tier one supplier or OEMs (e.g. Eng Technology, UNICO) were linked to U.S. TNCs. A notable example is Dell, whose factory responds directly to the final customer so that all intermediary distribution links have

[43] Interview by Rajah Rasiah on 15 March 2008.

been eliminated. Its Managing Director reported that Penang stood out not only because of the smooth coordination of the State government and PDC, but also because of its cultural mix that offered a regional customization potential for much of Asia (Rasiah, 1995). Dell's inter-firm production network has generated considerable information and knowledge transfer and stimulated the differentiation and upgrading of several local firms in Penang (Best and Rasiah, 2003).

In order to become first tier suppliers, local firms in Penang had to go through several stages of technology development. In the first stage, suppliers did simple grinding, machining, welding and stamping operations to supply trolleys, components and parts to TNCs, using imported machinery, and designs and drawings supplied by TNCs. This stage characterized the local machine tool firms in the 1970s. In the second stage, supplier firms upgraded to assemble semi-automated machinery and precision tools using imported machinery and designs and drawings from TNCs. In the third stage, supplier firms adapted and reverse engineered imported machinery for their own use, and sold high precision foreign components and machinery to TNCs in Malaysia and affiliates abroad. In the fourth stage, suppliers developed their own original equipment manufacturing capabilities to supply precision components and machinery to TNCs in Malaysia and their affiliates abroad. In the fifth stage, suppliers introduced original designs, although most production is subcontracted.

Several first-tier firms, i.e. those operating at stage four, evolved from simple backyard workshops to modern firms, to become later TNCs in their own right. For example, Eng Technology has affiliates in China, Philippines, Malaysia and Thailand, while Atlan has affiliates in Malaysia and Indonesia. The organization of production in Penang is generally based on vertical integration, but a handful of firms are also showing a strong potential for horizontal integration. The creation of firms such as Trans Capital, Unico and Globetronics in the 1990s, all set up by former TNC employees, encouraged inter-firm cooperation in engineering activities and helped to raise the local demand for "front-end" operations such as chip design, surface mount technology (SMT), and applied engineering. Penang has achieved dynamic clustering of electrical and electronics manufacturing, however the lack of R&D infrastructure (including a shortage of engineers and scientists), has restricted further industrial upgrading. The Penang Government is keen on a proactive strategy to step up the local supply of engineers, scientists, and technicians and also wishes to complement it with a foreign skills attraction and dissemination programme.

5.2. The case of Klang Valley

Klang Valley is one of the earliest and major industrial hubs in the country and has better locational endowments than Penang. Klang Valley is situated in the central State of Selangor, the country's largest regional economy, close to Kuala Lumpur – the administrative centre and the commercial capital of Malaysia. Klang Valley is, therefore, close to all main federal ministries and agencies, including the business and investment promotion agencies of the Ministry of Industrial Development Authority. Consequently, it received strong federal support and could count on well-developed infrastructure, transportation and communication networks. Port Klang is a major international port on the main global shipping lines and is also located nearby Malaysia's international airport.

Together with Penang, Klang Valley was one of the first two designated free trade zones in Malaysia. Its locational advantages attracted some of the early foreign electronic TNCs in the 1965 (e.g. Matsushita). While the bulk of United States electronics corporations chose to locate in Penang, Klang Valley attracted a larger proportion of TNCs from South-East Asian emerging economies and Japan. Despite Klang Valley's better locational advantages, the earlier establishment of the electronics industry and the high concentration of TNCs, compared to Penang local suppliers were more entrenched in low value-added assembling activities. The State Government played a minor role in coordinating and facilitating SME capacity development and promotion of linkages.

The **State Economic Development Corporations** (SEDCs), a similar public institution to the PDC, did not play a proactive intermediary role as did the PDC in the following areas: the consolidation and dissemination of supplier information, the promotion of local procurements, matching potential partners, facilitating technology and skills development, and in supporting R&D activities. SEDCs rather focused on general industrial infrastructure development and land leasing. For example, when a massive flow of investors from Japan, Taiwan Province of China and the Republic of Korea sought to relocate to Malaysia in the late 1980s, SEDCs diverted highly labour intensive firms to the neighbouring States of Negeri Sembilan and Melaka to ensure that there would not be serious pressure on land and infrastructure.

Contrary to Penang, Klang was largely populated by Asian TNCs that, at that moment and in that specific sector, preferred "internal" rather than local sourcing. For example, all key management positions in Japanese TNCs were retained by Japanese managers, which tended to operate within the boundaries of their own inter-firm networks or intra-holding affiliates (keiretsu). Taiwan Province of China TNCs also tended to largely source inputs and services from their wholly-owned affiliates and showed limited interest in establishing contacts with local suppliers. This may be the reason why very few local firms in Klang Valley have developed strong technological interface with TNCs. For example, the two largest and most successful local electronics firms, OYL Electronics and Sapura, operated without production links with TNCs. Local machine tool and plastic firms linked to electronics firms were also quite limited in number.

Similarly to Penang, in 1992 the State Government in Klang Valley established the **Selangor Human Resource Development Center** (SHRDC), with the support of TNCs such as Matsushita, MEMC, Motorola, NEC, Denso, Texas Instruments and Western Digital. However, in Klang Valley,

internal staff developed the training programmes of the SHRDC. However, their content was not adequate for TNCs needs. This is why many TNCs set up their own specialized training programmes in tool making and precision engineering, collaborating with institutions such as the American Business Council, JACTIM, JETRO and the German Malaysian Institute.

In Klang Valley, the relatively fragmented industrial structure, with TNCs operating across broad electronics segments, made it difficult to develop a coherent set of training content for upgrading local skills. In 2002, the SHRDC tried to reproduce the Global Supplier Programme but this was terminated prematurely due to a lack of participation of local suppliers. Although TNCs had suggested a list of suppliers for the programme, the screening and selection was done by SHRDC staff based on the criteria set by the Federal Government. On one hand, local suppliers felt that TNCs were not committed to the programme and business deals were not guaranteed. On the other hand, TNCs limited demand for local suppliers did not justify their full engagement in the programme, or managers did not trust the quality of the suppliers selected by SHRDC.

Despite these constraints, some TNCs were able to carry out innovation and product-adaptation locally. Matsushita, for example, developed its split-level air conditioners using a flexible production model. The Malaysian executive director of Matsushita reported however that local product enhancement could have been much more prominent if more qualified engineers had been available in the region. Shortfalls in the availability of qualified technical personnel were reported as a major constraint also by Chip Pack, Motorola, Sony, Hitachi, JVC and Texas Instruments. The presence of the Multimedia Super Corridor (MSC) did not encourage the migration of skilled workers in the electronics industry as expected, despite the regulation providing easy access to the recruitment of a foreign high-tech workforce, particularly for IT-based industries.

As a result, in Klang Valley the level of intra-firm specialization remained high while inter-firm cooperation was very low. A recent study on TNC-SME linkages found that local suppliers had evolved little over the years with respect to upgrading and knowledge sharing (Rasiah, 2002b). First-tier suppliers of headquarters located in Japan, Taiwan Province of China or the Republic of Korea used technology from their parent companies abroad and had very limited inter-firm links with other local suppliers. The study revealed that those few firms that were linked to TNCs were usually confined to lower value-added, non-core components and they showed low technological capabilities and performance levels.

Companies such as JVC, Toshiba, Sony, NEC, Fujitsu and Hitachi reported that they had tried to increase local sourcing following the promotional efforts of both the State and the Federal Government under the Subcontract Exchange Programme and the Vendor Development Programme, both introduced in the late 1980s. However, the capacity of such programmes to promote linkages between anchor TNCs and local suppliers seemed to be short-term and limited to low end activities. Where specialized components were needed, such as microchips and lead frames, they were either imported from abroad or primarily sourced from their own affiliates in Malaysia.

Even United States and European firms reported that, given the different level of development of a competitive network of local suppliers, they could source locally far less in Klang Valley than in Penang. Motorola, Texas Instruments, Western Digital and Chip Pack reported sourcing between two to 20 percent of their purchases locally. Ericsson reported sourcing around 45 percent of its purchases from domestic firms, but largely from other TNCs. Paradoxically, Motorola and Chip Pack reported sourcing higher value-added components and equipment from Eng Technology and Loh Kim Teow located in Penang.

Overall, in Klang Valley the lack of TNC-SME linkages put serious limits on the learning and absorption capacity of local suppliers. It also heavily discouraged the outflow of potential entrepreneurs and new firm creation. This hindered the development of a domestic, multi-tier supplier structure and of new industrial segments so as to enable the specialization, upgrading and product differentiation of domestic firms.

6. Lessons learned and policy recommendations

A number of lessons can be drawn from the Malaysian experience on TNC-SME linkages. Overall, there are at least three key factors that deserve to be highlighted. First, Malaysia's capacity to attract and retain TNCs in the long term. Second, the ability of the Penang State government to attract TNCs that were more likely to form business linkages with local SMEs. Third, the positive interface of a small domestic market with a large number of export oriented TNCs. These factors can be explained by the following FDI attraction and linkages strategies:

Relying on FDI for long term industrial development

- It should be noted that Malaysia targeted FDI as a major plank to spearhead industrialization since the early 1960s - initially to generate investment and employment, subsequently to expand exports and foreign exchange, and eventually to drive upgrading and linkages. Excellent basic infrastructure (including improvements to roads and telecommunication networks from the mid-1980s) and policy coordination helped attract large inflows of FDI – the major waves taking place in the early 1970s, the late 1980s and the early 1990s. The Malaysian Government relied on generous financial incentives, good basic infrastructure and political stability, as well as on a highly skilled English speaking work force. The focus on upgrading and linkages became important in the 1990s, when a tight labour market encouraged the Government to pursue technology deepening and value chain widening instruments and institutions.

Establishing close TNC relationships with local firms

- From the Malaysian experience, it emerges that governments that wish to use FDI as a tool for industrialization or for acquiring know-how and penetrating export markets may target firms that are likely to develop linkages, open their supply chains and establish close productive relations with local firms. In developing economies that lack good infrastructure, the creation of industrial zones may be key to attract FDI, promote linkages and provide specialized business and investment support services. Additionally, in order to enable potential entrepreneurs to grow it is crucial to keep interest rates low, create targeted financial instruments and provide preferential loans to SMEs. In Malaysia, SMEs also benefited from macroeconomic stability, good infrastructure and policy coordination between government institutions, development corporations and private sector representatives, both at the federal and at the State level.

Coordinating National and State Government interventions

- At the State level, two key issues deserve attentive examination from a comparative perspective, namely the different types of government intervention and the different types of the TNCs located in Penang and Klang Valleys. The comparison between two States benefiting from similar federal support, but somewhat different state-level intervention, highlights the importance of effective government and institutional coordination. In Penang, the combined efforts of the State Government, the Penang Development Corporation, the Chamber of Commerce, and the Penang Skills Development Center helped stimulate strong systemic links that helped to support new firm creation and inter-firm linkages. The confinement of local government intervention to basic infrastructure reduced the generation of such systemic synergies in the Klang Valley.

Targeting FDI that is more conducive to the creation of linkages

- The case studies also revealed that Klang Valley was dominated by Asian TNCs that preferred to source inputs from established supplier networks in their home country. Thus, emerging local SMEs found it difficult to enter TNCs supply chains. On the contrary, Penang could benefit from the presence of a number of American and European TNCs, which are normally of larger size and more open to partnerships with local stakeholders. These differences were reinforced by geographical factors, considering that Penang is rather isolated while Klang Valley is situated near Kuala Lumpur. Rather than being a disadvantage, this enabled the Penang State Government to play a pivotal intermediary role in creating synergies among local development agencies, business associations, SMEs and TNCs. Some of these differences may explain why policy makers interact differently in the two electronics hubs.

Developing clusters and specialized skill development centres

- Finally, in Penang the creation of TNC-SME linkages was strictly linked to the presence of clusters. Unlike the traditional focus on individual firms, the cluster approach helped unravel systemic policy factors – including government instruments and institutions – to foster inter-firm cooperation, as well as vertical and horizontal networking. The presence of clusters was also instrumental in stimulating TNC-SME connections, as well as technology transfer and skills upgrading. In this context, the Penang Skills Development Centre was key in promoting stronger networking and collaborative relationships between companies and the State government, and in providing specialized training to local suppliers that perfectly matched the needs of TNCs. Contrary to the Selangor Human Resource Development Center in Klang Valley, the Penang Skills Development Centre let TNC representatives design the contents of the training programmes and it rigorously selected the SME participants based on TNC criteria and demands.

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Chapter V

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN MEXICO[44]

1. Introduction

Mexico employed import substitution strategies for several decades until the early 1980s, when the debt crisis stirred a drastic industrial reorganization process and the quest began for a completely renewed development model. The inward model of industrial organization based on the principles of vertical integration was abandoned in favour of more horizontal policies, based on entrepreneurship promotion and liberalization policies. This drastic change of policy approach was successful in developing a competitive export platform: the value of Mexican exports grew from $18 billion in 1980 to $187 billion in 2006. However, the main problem with the Mexican export model is the low competitiveness of domestic SMEs due to the lack of appropriate policies to encourage endogenous innovation. Local procurement by TNCs is very limited as well, thus reducing the modernization process spurred by spillover effects such as the transfer of technology, knowledge and skills to SMEs.

This paper first canvasses the historical backdrop of Mexico's export-oriented economy, highlighting the difficulties faced by most SMEs, which have been unable to benefit from the spill-over effects of TNCs and are therefore struggling to gain entry into global value chains. It then goes on to examine the policies and strategies implemented in Mexico for promoting TNC-SME linkages and upgrading local suppliers to meet global standards. The case studies of the electronics cluster in Guadalajara and the automobile cluster in Puebla shed light on the pattern of structural adjustment of the Mexican manufacturing sector in technological intermediate and advanced industries. They also show the importance of regional development strategies, in the absence of strong national policies, to cope with the challenges of rapid trade liberalization and increased global competition in sustaining the economic development of the country.

2. Economic backdrop

Mexico has a strong economy by many standards. The combination of a population well over 105 million (CONAPO, 2007) and a per capita GDP of $7,818 makes Mexico the 10th largest economy in the world (World Bank, 2007). Trade liberalization and deregulation have resulted in a dramatic transformation of the Mexican trade structure: from 1980 to 2005, exports have increased 12-fold and there has been a major shift from resource-based (especially oil-related) exports to manufacturing exports (whereas oil accounted for over 60 per cent of export earnings in the 1970s and early1980s, by the beginning of the 1990s manufacturing accounted for over 70 per cent, and for over 80 per cent in 2006). The structure of the GDP has also undergone some changes: the investment/GDP ratio has risen in the past two decades (although it remains low for a developing economy, at around 20 per cent of GDP); foreign trade (real exports of goods and services plus real imports of goods and services) has doubled from around one-third of the GDP in the 1980s to currently over 60 per cent.

[44] This chapter is based on a report prepared for UNCTAD by Prof. Clemente Ruiz Duran at the Universidad Nacional Autónoma de México.

Table 1. Economic performance in perspective (GDP annual growth)

	1980 - 1990	1991 - 2000	2001 - 2005	1980 - 2005
Mexico	2.5	3.5	1.8	2.8
NAFTA partners				
United States	2.9	3.3	2.5	3.0
Canada	2.7	3.0	2.5	2.8
Main competitors				
China	9.2	10.1	9.5	9.8
Republic of Korea	7.8	6.2	4.5	6.6

Source: World Bank WDI website, 2007.

Table 2. Economic effects of NAFTA in Mexico

	1984-1993	1994-2005			
	Total	Total	USA	Canada	Rest of the World
Exports (annual growth rate)	7.9%	13%	11.1%	13.3%	12.8%
FDI (net inflows, % of GDP)	5.7%	6.4%	3.7%	0.2%	2.5%

Source: Data from INEGI.
n.a. = not available.

Despite steady export growth, led by FDI, Mexico's GDP growth has suffered from very unstable trends. The weak policy environment of the 1980s (commonly referred to as Latin America's lost decade) contributed to a negative GDP growth, which was also the consequence of oil-related boom-and-bust cycles. Regardless of a major liberalization process which began in 1985, in the 1990s the average growth rate was still less than half that achieved during the 1960s and the 1970s, and became stagnant at the turn of the century, lagging well behind that of Mexico's major competitors in East Asia, such as China and the Republic of Korea (see table 1).

The implementation of the North American Free Trade Agreement (NAFTA)[45] in 1994 created many opportunities for Mexico to attract new foreign investment and promote exports (see table 2). Since NAFTA, the proportion of manufacturing producers participating in world markets has risen steadily, and by 2001, Mexico had emerged as the eleventh leading exporter of high-tech products in the world (i.e. the country's share in world electronic exports went from 0.8 per cent in 1985 to 3 per cent in 2000).

However, with NAFTA, the Mexican economy increased its vulnerability to the supply and demand trends of the American economy. Its average growth of 5.5 per cent in 1996-2000 coincided with an acceleration of growth in the United States to an annual average of 4.1 per cent. The recession in the United States in 2001 subsequently prompted Mexico's GDP to contract by 0.2 per cent in that year and the United States investment boom in 2004-05 (when the gross fixed investment rose by an annual average of 7.1 per cent) was reflected in a stronger performance in Mexico in 2004-06, with an average GDP growth of 4.1 per cent a year. In view of this problem, in the years immediately after NAFTA the Mexican authorities tried to diversify their international trade structure by implementing a dozen trade agreements that removed trade barriers with over 40 countries. Nevertheless, more than 80 per cent of Mexican trade is still with the United States.

However, the vulnerability of Mexico's economic growth can be only partially explained by the increased dependence on the economy of the United States, and therefore by cyclical economic downturns. There are other local and global factors, along with deep structural problems in the industrial system, which hindered growth in the long term. For example, Mexico's overall Total Factor Productivity (TFP) declined sharply during the 1980s and remained stagnant during the 1990s and the mid 2000s. Analyzing Mexican TFP trends in more detail, Lopez Cordoba (2002) demonstrated that the introduction of NAFTA had a negative impact on intra-industry spillovers due to foreign firms' stronger interest in protecting their competitive edge, thereby minimizing technology transfers to local firms competing in the same markets. On the other hand, NAFTA strengthened inter-industry spillovers as TNCs invested in the modernization of local SMEs in order to achieve the required quality standards, and in some cases improving SMEs' ability to innovate. However, this transfer of technology is not generalized, as it did not affect all industries in all States of Mexico.

In particular, the industrial model of Mexico's *maquiladoras* has limited the potential impact of knowledge spillovers and linkage effects. A *maquiladora* is a factory or assembly plant which enjoys duty-free and tariff-free import of materials and components for manufacturing. However, in order to qualify for this program, the *maquiladora* has to export a certain percentage of its finished product.[46] The *maquiladoras'* model leveraged Mexico's proximity to the U.S market and lower labour costs, but lacked policy incentives to promote technology absorption, creative innovation and investment in R&D. This model has therefore become less competitive, as the inability to foster technological capabilities, a lack of a qualified workforce and investments in R&D are deterrents to attracting efficiency-seeking FDI. Further, its traditionally comparative low cost advantages have been dwarfed by Asian competitors. Both the Mexican government and industry leaders are extremely concerned about the increasing relocation of foreign firms from Mexico to Asia. Between 2000 and 2005, 34 per cent of *maquiladoras* have left Mexico to relocate to Asia (mainly to China) thus making it difficult for the Mexican industrial sector to compete (ECLAC, 2006). There is a need, then, to capitalize on the positive benefits of NAFTA, namely through concerted efforts by the public and private sectors to significantly improve the investment climate and create a business environment more conducive to the transfer of knowledge and the realization of endogenous SME innovation. Such efforts are addressed in further detail in section 4.

2.1. Overview of the SME sector

In Mexico, SMEs represent 99.8 per cent of all enterprises (see table 3). In 2006, there were approximately 3 million SMEs in Mexico generating 52 per cent of GDP, employing 71 per cent of formal labour force and accounting for 11 per cent of total exports (CANACINTRA, 2006).

Most of these SMEs are located in the retail, services and agriculture industry. Only about 11 per cent are located in manufacturing (CANACINTRA, 2006). In this sector, SMEs

[45] NAFTA established a free-trade zone in North America; it was signed in 1992 by Canada, Mexico, and the United States and took effect on 1 January 1994. NAFTA is the largest trade bloc in the world. It eliminated the majority of tariffs on products traded between Canada, the United States and Mexico, and gradually phased out other tariffs over a 10-year period. Restrictions were to be removed from many categories, including motor vehicles, computers, textiles and agriculture. The treaty also protects intellectual property rights (patents, copyrights and trademarks), and outlines the removal of investment restrictions between the three countries.

[46] This scheme and the other major export instrument called PITEX were amalgamated into the IMMEX program (Spanish acronym for the Program of "Manufacturing Industry, Maquiladora and Export Services") in 2006. This programme grants fiscal and administrative benefits contingent on compliance with minimum export requirements. Two other programmes (ALTEX and ECEX) also grant administrative facilities and/or financial support to companies that meet export requirements.

Table 3. Firms by size

	Total	Size			
		Micro	Small	Medium	Large
Number of Firms	3,005,157	2'853,291	118,085	27,073	6,708
Share of total	100.0	95.0	3.9	0.9	0.2

Source: CANCACINTRA, 2006.

are mostly concentrated in mature resource-based and low technology industries such as apparel, textile and furniture, in which competition is high and productivity gains and assets accumulation are low (see table 4).

Table 4. Manufacturing firms by size and technology level

	Total	Size			
		Micro	Small	Medium	Large
Number of Firms	328,718	306,083	16,205	3,379	3,051
Share of Total	100.0	93.1	4.9	1.0	0.9
Resource Based	53.7	51.3	1.8	0.3	0.2
Low Technology	26.2	24.2	1.5	0.3	0.2
Medium Technology	19.1	16.9	1.5	0.4	0.3
High Technology	1.0	0.6	0.2	0.1	0.1

Source: Own estimates based on INEGI Economic Census, 2004.

Table 3 shows that most SMEs in Mexico are micro enterprises. These firms typically employ between zero and ten employees (OECD, 2007b), are mostly family run and produce generally for the local market. In addition, the official figures exclude other micro firms that represent between 40-60 per cent of the workforce operating in the informal sector, (EIU, 2008).

The concentration of SMEs in Mexico has strong regional variations. The States of México DF, México State, Jalisco, Veracruz and Puebla account for more than 40 per cent of the total of SMEs, while other regions account for a much smaller share of the national economy. For example, the States of Nayarit, Quintana Roo, Campeche, Colima and Baja California Sur jointly account for 3.7 per cent of the SME total. Further, the survival rate of SMEs in Mexico is historically low, with an average of 70 per cent of new SMEs disappearing in less than two years. This is reflective of their vulnerability to external competitive pressures resulting from low management capabilities, lack of market oriented strategies and low technological expertise. During the period from 1998-2003, for example, a total of 33,000 SMEs closed their operations due to a drastic economic downturn and increased foreign competition, with a loss of approximately 14,000 jobs (INEGI, 2004). According to the Mexican Social Security Institute (IMSS) between 2002 and 2004, 10,176 micro enterprises disappeared from the formal sector.

The new programme launched in 2007 by the Ministry of Economic Development, called "Mexico Emprende", specifically aimed at enhancing the competitiveness of Mexican SMEs, is a sign of the federal government awareness of the pressure local companies are facing due to global competition and of the political willingness to provide concrete answers to the need for upgrading the technological capabilities of Mexican SMEs. In particular, there is a strong need for promoting R&D investment both in the public and the private sector, considering that in 2006 R&D expenditures by firms hardly reached 0.40 per cent of the GDP. A survey carried out in 2002 also showed that from 1999 and 2002 the number of firms involved in R&D had decreased (from 38,512 to 33,649), and that only 5.8 per cent of SMEs had been involved in research activities (ENESTYC, 2002).

2.2. Industrial and technological performance

Evidence shows that, during the last decade, two important industrial restructuring processes have characterized the Mexican economy: the first process is linked to the contributing of the different industries to the overall manufacturing output and the second is a spatial restructuring process related to the decentralization of industrial activities.

As a consequence of the *restructuring* process, intermediate and high technology industries have shown more dynamic trends than resource-based and low technology industries which traditionally dominated Mexico's economy. Since 1988, the share of high technology industries accounting for the total GDP has gradually increased, led by the success of high technology sectors such as software and biotechnology, while the share of low technology industries has slightly decreased (see table 5). The NAFTA agreement was expected to further accelerate this trend, but did so only partially. Mexican firms were able to develop some pockets of excellence and were performing at high productivity standards when linked with TNCs operating in high technology and intermediate technology industries. However, this was limited to a few sectors and a few large domestic firms, and did not reach the extended base of local suppliers, mostly *maquiladoras.*

In the case of *resource-based industries,* the price adjustments of wood, oil and tobacco products, and the lack of investment led to progressive decline in their share of total manufacturing output. For example, oil regions have not been able to capitalize on periods of high oil prices to modernize petrochemical complexes. Also, the capacity of refineries is so low that the country had to export crude oil and import refined products, causing a substantial deficit of refined products of nearly 4 billion USD in 2006.

In *low technology industries,* food processing industries have continued to grow as meat, dairy products, beer and soda-water processing industries have been able to take advantage of the huge demographic expansion (there was an increase of more that 20 million people in population from 1990 to 2006). However, the overall share of low technology industries' over total manufacturing output declined. This was due to the fact that the apparel industry (especially jeans) was heavily challenged by other low cost producers from East Asia such as China, Vietnam, Cambodia, etc. This was largely a consequence of the lack of foresight during the export boom of the 90s, i.e. the inability of local jeans producers, mainly located in the Laguna region in

Table 5. Mexico: a. Annual rates of growth by Industries

Year	Total	Resource Based Industries	Low Technology Industries	Medium Technology Industries	High Technology Industries
		Share of GDP (%)		Annual rates of growth	
1988	18.6	6.5	2.8	7.3	2.0
1989	19.2	6.6	2.9	7.6	2.1
1990	19.6	6.6	3.0	7.8	2.2
1991	19.5	6.5	3.0	7.8	2.2
1992	19.5	6.5	2.9	7.9	2.2
1993	19.1	6.5	2.8	7.6	2.2
1994	18.9	6.4	2.7	7.6	2.2
1995	19.2	6.7	2.8	7.4	2.3
1996	20.2	6.6	2.9	8.2	2.5
1997	20.8	6.4	3.0	8.5	2.9
1998	21.4	6.5	3.1	8.7	3.1
1999	21.5	6.5	3.0	8.8	3.2
2000	21.5	6.3	3.0	8.9	3.3
2001	20.6	6.3	2.8	8.5	3.0
2002	20.3	6.3	2.7	8.5	2.8
2003	19.8	6.3	2.5	8.3	2.7
Average	20.0	6.5	2.9	8.1	2.6
		Share of manufacturing (%)		Index 1988 = 100	
1988	100.1	34.9	15.3	39.0	10.9
1989	99.9	34.4	15.2	39.4	10.9
1990	100.0	33.6	15.4	39.6	11.4
1991	100.1	33.4	15.3	40.2	11.2
1992	99.9	33.1	14.9	40.6	11.3
1993	100.0	34.1	14.7	39.8	11.4
1994	100.0	33.7	14.5	40.2	11.6
1995	100.0	34.9	14.5	38.7	11.9
1996	100.0	32.7	14.4	40.4	12.5
1997	100.0	30.8	14.6	40.9	13.7
1998	100.0	30.4	14.3	40.7	14.6
1999	99.9	30.1	14.2	40.9	14.7
2000	99.9	29.2	13.9	41.5	15.3
2001	100.0	30.6	13.6	41.1	14.7
2002	100.0	31.1	13.3	41.7	13.9
2003	100.0	32.0	12.8	41.7	13.5
Average	100.0	32.4	14.4	40.4	12.7

Northern Mexico, to upgrade their value-added content by incorporating design and innovation components into their production.

In the case of *intermediate technology industries,* the increased share of total manufacturing output was mainly due to the growth of the auto industry. In 2006, Mexico ranked tenth in the auto production business worldwide, and its total value added reached 15 billion USD. The first assembly plants were actually opened in the 1950s and since then policy makers have been trying to increase domestic content through the development of auto parts producers. As a consequence of the NAFTA agreement, the industry registered major investment flows, with new assembly plants being opened in the country's northern States, and a series of auto parts producers proliferating around them.

In the case of *high technology industries,* Mexico has attracted various types of global electrical and electronics producers in the last decade: for example, IBM opened a portable computer factory in Guadalajara, which originated an emerging network of local suppliers, and new facilities for assembling TV sets were set up in Baja California (Tijuana and Mexicali). In addition to the electronics and household appliance sector, there were new developments also in the surgical and medical instrument manufacturing sectors.

Mexico: b. Annual rates of growth by Industries

Year	Total	Resource Based Industries	Low Technology Industries	Medium Technology Industries	High Technology Industries
			Annual rates of growth		
1988	0.0	0.0	0.0	0.0	0.0
1989	7.9	6.6	7.7	9.1	8.0
1990	6.8	4.0	7.8	7.3	11.8
1991	3.4	2.9	2.7	4.9	0.9
1992	4.2	3.4	1.6	5.4	5.7
1993	-0.7	2.1	-2.2	-2.7	0.3
1994	4.1	3.0	2.9	5.1	5.2
1995	-4.9	-1.7	-4.9	-8.6	-1.8
1996	10.8	3.9	10.3	15.8	15.9
1997	9.9	3.5	11.3	11.3	21.0
1998	7.4	6.0	5.4	6.8	14.3
1999	4.2	3.5	3.2	4.9	5.0
2000	6.9	3.5	4.9	8.4	11.4
2001	-3.8	0.7	-5.9	-4.9	-7.6
2002	-0.7	1.0	-3.3	0.9	-6.0
2003	-1.3	1.5	-4.9	-1.2	-4.2
Average	3.6	2.9	2.4	4.2	5.3
			Index 1988 = 100		
1988	100.0	100.0	100.0	100.0	100.0
1989	107.9	106.6	107.7	109.1	108.0
1990	115.2	110.9	116.1	117.1	120.8
1991	119.1	114.2	119.2	122.8	121.9
1992	124.1	118.0	121.1	129.4	128.8
1993	123.3	120.5	118.5	125.9	129.3
1994	128.3	124.1	121.9	132.4	136.0
1995	122.0	122.0	115.9	121.0	133.5
1996	135.2	126.7	127.8	140.1	154.7
1997	148.6	131.1	142.2	155.9	187.2
1998	159.5	139.0	149.9	166.5	213.9
1999	166.3	143.8	154.7	174.5	224.5
2000	177.7	148.9	162.3	189.3	250.1
2001	170.9	149.9	152.7	180.0	231.1
2002	169.8	151.5	147.7	181.6	217.2
2003	167.7	153.8	140.5	179.4	208.0
Average					

Source: Estimates based on INEGI Sistemas de Cuentas Nacionales website, 2005.

As a result, high technology industries have become the most dynamic among all Mexican manufacturing industries, with electrical and electronics industries reaching a value added of $1.6 billion in 2006, followed by audio and video equipment with a value added of $1.1 billion.

The *spatial restructuring* process was a consequence of the decentralization of industrial activities concentrated in Mexico City and its surrounding areas (Federal District, Mexico State, Morelos, Tlaxcala, Hidalgo and Puebla). The expansion of new industrial locations took place mainly in border-states (i.e., Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, Tamaulipas) and the so-called "reindustrializing" States (i.e. Jalisco, Aguascalientes, Guanajuato, Queretaro, San Luis Potosi). Both border and reindustrializing States became the platform of the new export-oriented strategy: the former with its *maquila* operations and the Monterrey industrial complex, and the latter with the introduction of new products in the electronics (laptop production), household appliances and the auto parts industries. Even if Mexico City and its surrounding areas still host most accumulated assets, they have been surpassed in employment and value added by border-states (see table 6).

Table 6. Restructuring and decentralization matrixes, 1999–2004

	National level	DF & environs	Border States	Re-industrial-ization	Resource Based	Oil States	Tourism States
Accumulation matrix (%)							
Manufacturing Industries	0.0	-2.9	2.3	1.7	-0.1	-0.7	-0.2
Resource Based Industries	0.3	-0.1	-0.7	0.4	0.6	0.4	-0.3
Low Technology Industries	-0.8	-1.0	0.1	0.2	-0.1	0.0	0.0
Intermediate Technology Industries	1.3	-1.5	3.3	1.3	-0.7	-1.1	0.0
High Technology Industries	-0.9	-0.3	-0.4	-0.2	0.0	0.0	0.0
Employment matrix (%)							
Manufacturing Industries	0.0	-2.4	1.6	-0.4	0.6	0.2	0.4
Resource Based Industries	0.4	0.2	-0.1	-0.2	0.4	0.1	0.0
Low Technology Industries	-1.7	-1.1	-0.8	-0.3	0.0	0.1	0.3
Intermediate Technology Industries	1.3	-1.3	2.3	0.2	0.1	0.0	0.1
High Technology Industries	0.0	-0.2	0.2	-0.1	0.0	0.0	0.0
Value added matrix (%)							
Manufacturing Industries	0.0	-3.2	2.3	-2.3	2.1	1.0	0.1
Resource Based Industries	3.5	0.0	1.5	-0.2	1.5	0.7	-0.1
Low Technology Industries	-0.8	-0.8	0.1	-0.1	0.0	0.0	0.1
Intermediate Technology Industries	-2.6	-1.5	0.1	-2.0	0.5	0.2	0.1
High Technology Industries	-0.1	-0.9	0.7	0.0	0.0	0.0	0.0

Source: Estimates based on INEGI Economic Census, 2004.

3. Recent FDI trends

The new Investment Law that came into effect in 1993 has driven new investment inflows to Mexico from an annual average of $1.6 billion in the 1980s, to $5 billion in the 1990s, and further up to $10 billion in the early 2000s. According to the Mexican Ministry of Economic Affairs, from 1995 to 2006 FDI flows reached a total amount of $177 billion, of which 58 per cent were new investments, 17 per cent reinvested profits, 12 per cent inter-company accounts, and 13 per cent imports of fixed assets by *maquiladoras* (ECLAC, 2006). During the last decade Mexico's FDI inflows have been remarkably voluminous but relatively unstable, and manufacturing investment has been the main recipient of FDI. For example, in 2005 manufacturing investment accounted for 58.05 per cent of the total. Data show, however, that from 2005 to 2006 FDI declined by 29 per cent, mainly due to a decline in the amount of mergers and acquisitions by U.S. companies (see table 7). Most manufacturing FDI in Mexico are in fact channelled into the *maquila* industry, which depends heavily on the economic and industrial performance of the United States.

In 2005/2006, the automotive sector was the fastest growing sector and has received the majority of FDI (17.32 per cent). The leading TNCs (Ford, General Motors, Nissan, Volkswagen and DaimlerChrysler) and several auto parts manufacturers have invested in expanding and modernizing plants and introducing new models, in order to increase production capacity and improve the range and quality of their products. In particular, investment by Japanese companies is gathering momentum following the conclusion of a free trade agreement between Mexico and Japan, which aimed at diversifying the export market and at reducing Mexico's dependency on the United States. According to ECLAC, the most prominent examples are: Nissan's $1.3 billion investment to produce a new compact model for sale in the United States; Toyota's $160 million investment to expand its first Mexican assembly plant; the Bridgestone tire company's $220 million investment in setting up a plant in Nuevo Leon, with 95 per cent of its production destined for export to Canada and the United States.[47]

Table 7. Mexico: NET FDI Inflows, 1999-2006 ($ millions)

1999	2000	2001	2002	2003	2004	2005	2006
13,712.20	17,789.50	27,448.90	19,363.10	15,340.10	22,395.90	19,736.20	15,935.40

Source: Secretaria de Economia. March, 2007.

The United States continued to be the major investor in Mexico during the last ten years, and provided two-thirds of the total FDI inflow to the country. After the opening of the financial sector to foreign investors in the 1990s, Spain, which owns two of the largest Mexican financial groups (BBVA Bancomer and Santander-Serfin), became the second largest investor, contributing to 10.47 per cent of the total FDI inflow. The Netherlands was the third largest investor with 10.47 per cent, followed by the United Kingdom, Canada, Germany, and Switzerland. Asian investors also have a long history in Mexico. In the early twentieth century, Chinese migrants helped to develop the border city of Mexicali. After the Second World War, Japan opened an auto factory (Nissan) followed by large investment in the electronics sector. Nowadays, Japan is one of the most important investors in the country (see table 8).

Since the conclusion of NAFTA, three quarters of the FDI stock in Mexico were concentrated in intermediate and

[47] This plant is the first outside Japan to incorporate the Bridgestone Innovative and Rational Development (BIRD) production system, which is characterized by a fully automated production process.

Table 8. FDI by Country of Origin, 1999–2006

Country	Share of total (%)	Accumulated flows (%)
United States	61.25%	61.25%
Spain	10.47%	80.05%
Netherlands	10.05%	93.01%
United Kingdom	2.89%	64.14%
Canada	2.68%	82.96%
Germany	1.90%	66.04%
Japan	1.75%	67.79%
Switzerland	1.61%	69.40%
Italy	0.23%	93.23%
Sweden	0.22%	80.27%
France	0.18%	69.58%
Others	6.77%	100.00%

Source: Ministry of Economy, 2007.

high technology industries. In particular, US investors focused their operations on the auto, electronics, and apparel industries, in which low cost subcontracting opportunities to Mexican firms in the *maquilas* have helped American firms to stay competitive. On the other hand, the Netherlands, Switzerland and Italy mostly invested in resource-based industries and Canada in low technology manufacturing, mainly in the apparel industry. Most intermediate and high technology industries are export-oriented, and only a minor share of production is for domestic sale. For example, in 2006 auto production reached 1.5 million units and 1 million were exports. Most manufacturing output of low technology industries such as the apparel industry (e.g. the jeans operation in the Laguna region) is for export. Only resource-based industries, especially the food industry, target the domestic market.

4. The policy framework

In the last century, Mexico has adopted two very different industrial policy models. From the end of the 1940s to the beginning of the 1980s, import substitution industrialization strategies prevailed, mainly through protectionist measures and the creation of Development Banks. These came to an end with the crisis of the early 1980s, when a new export-oriented strategy was developed. As a consequence, deep economic reforms designed to favour market mechanisms in economic activities and to reduce the State's direct involvement in the economy were initiated.

The main elements of this reform process include:

- Implementation of sound monetary and fiscal policies aimed at maintaining macroeconomic stability;
- Improvement of the regulation and supervision of the financial sector and internationalization of the commercial baking sector;
- Privatization of public enterprises;
- Opening the domestic market to foreign trade;
- Lifting of entry restrictions of foreign capital in most sectors; and
- Private sector development.

4.1. Improving the business and the investment climate

Mexico faced significant macroeconomic and financial challenges in the early 1980s and mid - 1990s. In the years preceding 1982, Mexico almost doubled its debt to output ratio to finance its expansion (World Bank, 1994.) The government believed that increasing oil revenues would provide the funds necessary to service its debt. However, a fall in international oil prices combined with a rise in interest rates in international financial markets forced Mexico to announce the suspension of debt service on its commercial loans in 1982.

Mexico's immediate macroeconomic policy response to the crisis was to drastically cut public spending and to restore price stability. As economic conditions were still deteriorating, the Mexican government introduced in December 1987 an exchange-rate based stabilization plan. As a result, Mexico adopted first a pegged exchange rate regime and subsequently an adjustable narrow band system. The consequence of the greater nominal exchange rate stability, reinforced by capital inflows from investors seeking better returns, was a sharp real exchange rate appreciation. Currency appreciation made imports cheap relative to domestic production and Mexico's external current account deficit widened to such extent that investors began to question its sustainability. In addition, the liberalization of the financial sector and the privatization of the banking system led to considerable private sector credit growth at a time when there was inadequate financial supervision and regulation by the monetary authorities. The combination of these factors exerted strong pressure on the foreign exchange market. Ultimately, speculative pressures against the peso led to abandonment of the peg and the adoption of a floating exchange rate on 22 December 1994.

Mexico's fiscal policy response to the 1994-1995 currency crisis was to increase public savings through a combination of revenue-enhancing and expenditure-restraining measures. Ever since, Mexico has conducted fiscal policy in a prudent manner. However, the underlying situation of public finances is not yet sound because of the heavy reliance of the budget on oil revenues which is unstable (OECD, 2007a).

Fiscal discipline was accompanied by responsible monetary policies. The Mexican Central Bank that became independent in 1993 adopted tight monetary policy and has brought down average annual consumer price inflation from 35 per cent in 1995 to 4 per cent in 2007, despite the substantial increase in energy and commodity prices since the middle of 2006 (EIU, 2008).

Another challenge faced by the Mexican government since the 1994-1995 peso crisis was to cope with the fragility of the financial system. Significant reforms were undertaken to enhance the financial regulation under the supervision

of the Banco de México, the Ministry of Finance and the National Banking and Security commission, to remove restrictions to the entry of foreign banks and to improve bankruptcy and lending laws. These measures led to a quick recapitalization of the banking sector, the transfer of good banking practices and rapid increase credit to private sector (Banco de Mexico, 2008). However, there still remains much to be done to develop financial intermediation, particularly to small and medium-sized enterprises.

Thanks to these reforms, Mexico now exhibits a much more solid macroeconomic framework and healthy financial system than in the past. This contributed, along with Mexico's trade liberalization policy and structural reforms, to increased efficiency and competitiveness.

The latest Doing Business Report (World Bank, 2009), reveals that Mexico is one of the three top reformers in Latin America. In worldwide comparison, Mexico ranks 56 out of the 181 countries analyzed (see table 9). In general, starting a business in Mexico requires 9 procedures and takes 28 days on average. However, the Doing Business Report 2007 indicates that there are large discrepancies among different Mexican States. While some States compare well with the best in the world, others need further reforms to become globally competitive in ease of doing business. For example, in 2006 Aguascalientes ranked the highest among all Mexican States. Property registration took 18 days as compared to 154 days in the State of Quintana Roo. In particular, Aguascalientes ranked 17th in a list of 175 global economies with regards to the time it takes to start a business, while the Mexican State where it takes the longest time ranked 146th (see table 10).

In view of further improving the competition environment, Mexico enacted in June 1993 the Federal Law of Economic Competition (FLEC). It aimed at protecting the competitive process through the prevention and elimination of monopolies and anticompetitive practices. In this regard, the FLEC established the Federal Competition Commission (CFC) as an independent regulatory agency responsible for its enforcement. In April 2006, amendments to FLEC were approved that clarified the CFC's procedures. Yet, despite the progress achieved since the FLEC was passed, the effectiveness of competition policy has been affected by excessive litigation and lack of economic expertise in the judicial system. Moreover, there are sectors were competition enhancing regulations are not effective or enforceable and some private and public sectors monopolies still remain. Nevertheless, the creation of a solid domestic competition framework through the approval of the FLEC also allowed Mexico to take full advantage of its trade openness.

Mexico started to liberalize trade in mid -1985. As a consequence, import license requirements, official import prices, and quantitative restrictions were gradually eliminated (Agosin, Ffrench-Davis, 1995). In addition, Mexico's trade reform programme gave exports a large priority. Therefore, export permit requirements were generally eliminated**.** The only restrictions that still remain are found in the context of export promotion programmes such as the maquiladora industry.

Mexico has also used international free trade agreements to promote trade. In 1986, Mexico joined the General Agreement on Tariffs and Trade (GATT) and cemented its open trade stance with the United States and Canada through NAFTA in 1993. Since the mid-1990s, the Mexican government has been quite proactive in concluding free trade agreements with its key trading partners. The main free trade agreements presently in effect include (ordered by date) the following:

Table 9. Time required to undertake business-related procedures – Mexico compared to selected countries

Procedure	Mexico	Chile	China	India	Sweden
Time required for starting a business (days)	27	27	35	35	16
Time required for registering a property (days)	74	31	32	62	2
Time required for enforcing contracts (days)	415	480	292	1420	208
Time required to complete insolvency proceedings (year)	1.8	2.4	5.6	10	2

Source: Doing Business 2009, World Bank Group.

Table 10. Time required to undertake business-related procedures – comparison among Mexican States

Procedure	Mexico (average)	Aguas Calientes	Guerrero	Quintana Roo
Time required for starting a business (days)	27	12	54	69
Time required for registering a property (days)	74	18	29	154
Time required for enforcing contracts (days)	415	290	280	568

Source: Doing Business in Mexico 2007, World Bank Group.

Efficiency in the Mexican public sector was sought through a comprehensive privatization programme that started in the wake of Mexico's debt crises of 1982. This privatization process reduced considerably the size and scope of the public-owned sector and consequently, generated new business opportunities.

- Free Trade Agreement (NAFTA) with Canada and the United States (1994);
- G-3 Free Trade Agreement with Colombia and the Bolivarian Republic of Venezuela (1995);
- Free Trade Agreement with Costa Rica (1995);
- Free Trade Agreement with Bolivia (1995);
- Free Trade Agreement with Nicaragua (1998);
- Free Trade Agreement with Chile (1999);
- Free Trade Agreement with the European Union (2000);
- Free Trade Agreement with Israel (2000);
- TN Free Trade Agreement with Guatemala, El Salvador and Honduras (2001);
- Free Trade Agreement with the Asociación Europea de Libre Comercio (AELC) with Iceland, Norway, Liechtenstein and Switzerland (2001);
- Free Trade Agreement with Uruguay (2004);
- Free Trade Agreement with Japan (2005); and
- Free Trade Agreement with MERCOSUR (Pending Ratification).

Mexico's trade policy has been closely associated with the promotion of foreign investment. Mexico has adopted an open-door approach to FDI since 1993, when the more restrictive investment law adopted in the early 70s (*Ley para promover la Inversión Mexicana y Regular la Inversión Extranjera)* was replaced by the new investment law *(Ley de Inversión Extranjera)*. Up to date, the 1993 foreign investment law has had several amendments. As a result, the sectors open to FDI represent today more than 95 per cent of GNP (Ministry of the Economy, 2008). However, there is still scope to further ease restrictions, particularly in some services and infrastructure sectors, including telecommunications, domestic land transport, coastal shipping and airports (OECD, 2007a).

Further measures have been undertaken to improve Mexico's business climate: Mexico has shown commitment toward achieving good governance. Indeed, there have been an increasing number of public agencies and initiatives dealing with anti-corruption. However, corruption and inefficient government bureaucracy are still seen as the two most problematic factors for doing business in Mexico (Global Competitiveness Reports 2008-2009, World Economic Forum). Moreover, Mexico has made efforts to significantly enhance the coverage, quality, and competitiveness of its infrastructure. Accordingly, Mexico launched in 2007 a five years national infrastructure programme that seeks to sharply increasing public and private investment in infrastructure. More specifically, the programme seeks to widen telephone and internet access, to expand the railway and port system, to build new airports as well as to modernize and expand highways and rural roads (EIU, 2008). As public funds are not sufficient to realize the projects, Mexico's government has put in place public private partnership model to develop the infrastructure. Nevertheless, more has to be done to improve infrastructure.

As can be seen, significant reforms to make Mexico's economy more efficient and productive have been undertaken. Nevertheless, Mexico still faces important problems and challenges that need to be addressed: A labour market reform is needed to enhance the adaptability of the workforce and reduce obstacles to job creation in the formal sector. However, the labour market reform proposal sent to Congress in 2002 has been removed from the policy agenda in 2005 and no further progress has been made. Also, skilled labour remains in short supply, mostly due to deficiencies in the public education sector despite a pronounced increase in investment in education over the past 15 years (Secretaría de Hacienda y Crédito Público, 2008). Finally, since the mid-1990s, Mexico's security situation has considerably worsened which has had a negative impact on Mexico's competitiveness (EIU, 2008). Thus, the Mexican Government has to make additional efforts to tackle organized crime.

4.2. Attracting FDI strategically

FDI has traditionally played an important role in the development of the Mexican economy. At the beginning of the last century, most foreign investors were interested in resource-based investments, mainly in mining. When Mexico began to protect its resource-based industries and nationalized its oil industry in the 1930s, most foreign investors left the country. They came back again in the 1960s attracted by the monopolistic profits granted by protectionist measures and invested in industrial activities such as manufacturing of auto parts and assembly of household appliances. This period lasted until 1982 and can be defined as the "diversification period", which boosted the average annual growth of the Mexican economy to 6.4 per cent. In the aftermath of the debt crisis, economic growth became less dynamic (with an annual rate of 2.4 per cent from 1982 to 2004) and it became vital to revamp exports. Soon it became clear that FDI would play a key role in expanding export capacities, supporting the modernization of productive capacities, and financing the deficit account.

Even before Mexico's Foreign Investment Law was liberalized in 1993 substantial foreign investment took place within the export promotion programmes as there were few restrictions on FDI in the *maquiladora* industry.

In 1993, the new foreign investment law was enacted and replaced the 1973 Law that governed the previous investment regime. This law provided non-discriminatory treatment for most foreign investment, eliminated performance requirements, and liberalized criteria for automatic approval of foreign investment. However, activities such as oil, basic petrochemical activity, electricity, nuclear energy, radioactive minerals, telegraphs, radio telegraphy, mail, central bank activities, control and supervision of ports and airports were reserved to the State and activities such as ground transportation, tourism and freight, gasoline and gas distribution, radio and TV services (except cable TV), credit unions, development banking and professional and technical services specified by law were still reserved

Table 11. Main FDI agencies

National Bank for Foreign Trade	In charge of financing and promoting foreign direct investment. It offers a wide range of financial products and services adapted to the individual features and needs of each business.
PROMEXICO	From the table can be observed that the investment promotion efforts by States and municipalities comprise incentives packages including tax cuts or exemptions, access to infrastructure, provision of free or subsidized land, cuts in utility rates and other services.
Secretaria de Promocion Economica (SEPROE)	It offers mainly support service for investors.
Gobierno del Estado de Guanajuato	Attracts foreign investment by offering utility fee exemptions, financing public infrastructure and providing technical assistance.
Industrial Development Commission of Mexicali	Attracts and facilitates the activities of foreign industrial firms by serving as a clearing house for information.
Economic Development Commision of Ensenada	Provides valuable information related to demographic and socio-economic data, infrastructure, and industrial and commercial port services.
Economic Development Council of Sonora	Facilitates investment of foreign investors by providing infrastructure improvements, offering exemption of payroll taxes during several years and offering free use of fully equipped office space during the start-up period.
PRODUCEN Center, Baja California	Provides consultancy services to improve and create new "Centros de Articulación Productiva" in order to promote business linkages between foreign firms and local companies.

Source: Multilateral Investment Guarantee Agency, World Bank Group.

to nationals. Furthermore, some sectors required majority national ownership (certain telecommunications services, air transport, port administration), or prior approval to own more than 49 per cent of the total capital (airports and cellular telephony). Accordingly, two main regulatory bodies were set up: the Registration Department for Foreign Investors (RNIE) in the Ministry of Economy, where an application form had to be filled out, and the National Foreign Investment Commission (Comisión Nacional de Inversión Extranjera), where the application had to be submitted if the specific activities were regulated..

The protected sectors have been substantially reduced over time. An extensive amendment to the foreign investment law in 1999 liberalized the majority of financial services and additional amendments opened other sectors such as retail trade and some areas of manufacturing. Natural resources, however, remain a restricted sector. In Mexico oil and gas are still under full government control and private sector ownership of hydrocarbons is forbidden.

Mexico also reformed its technology transfer requirements *to make* investments less cumbersome for foreign firms. Until 1973, Mexico's Technology Transfer Law imposed standards and prior registrations on all technology transfers. In 1990 though, the Mexican government put forth a new technology transfer specifying that government-enforced conditions on technology transfer would be phased out, and that technology agreements no longer needed government approval.

Despite this progress, further measures need to be adopted to attract additional FDI. Particularly, Mexico, needs to address its weak FDI sectoral targeting policies (CEPAL, 2005). The Mexican government has tried to address the issue in several ways. First, the task of attracting FDI to Mexico was passed in 2002 to the state-run development bank "National Bank for Foreign Trade" (Bancomext) which has the directive to put in place a more targeted and active investment policy. Furthermore, in June 2007, PROMEXICO, a new federal entity, was created. Besides promoting Mexican exports, it aims at coordinating federal and State government efforts as well as related private sector activities in order to harmonize investment programmes, strategies and resources.

Also, successful sectoral targeting initiatives carried out at the regional level have compensated the lack of strong national strategies. In the State of Baja California, for example, a "Regional Industrial Development Policy" for promoting foreign investment, technological development and productive capacity upgrading was approved in 2003 This programme covered key sectors such as medical and electronics devices and led to a remarkable export boom of two non-traditional products: flat TV screens in the cluster of Mexicali and medical equipment in the cluster of Tijuana.

Important national and subnational investment promotion agencies are listed in table 11.

It can thus be observed that many of the measures adopted by States and municipalities to attract foreign investment have been organized around clusters.

Industrial clusters are essential for attracting FDI since investments are largely steered towards locations that facilitate networking and specialization by firms in their core competencies.[48] A first cluster promotion programme was launched in 1997 called the Industrial Integration Programme. Its main activity was to stimulate investment by supporting training programmes aimed at developing human capital and developing public infrastructure. Furthermore, the programme also aimed at promoting strategic alliances and permanent commitments between large firms and SMEs. More recently, the Programme for Strategic Productive Projects focuses specifically on building local infrastructure with the help of local producers to attract foreign investment (OECD, 2007b). Other cluster development schemes are those of the States of Aguascalientes, Baja California, Chihuahua and Querétaro, which also have developed infrastructure for

[48] An industry cluster is a group of firms that, through their interactions with each other and with their customers and suppliers, develop innovative, cutting-edge products and processes that distinguish them in the market place from firms in the same industry found in other places.

industrial activities and implemented an strategy to attract foreign investments by means of tax incentives, provision of land at below market prices, the reduction or elimination of public service costs, staff training and help in negotiating with unions (ECLAC, 2004).

4.3. Strengthening the absorptive capacity

Due to the importance of SMEs to the national economy, the federal Government has shown interest in fostering their growth since the 1950s with broad public policies based on protectionism. Since then, the evolution of SME policies in Mexico has evolved along with the liberalization process of the economy. Perhaps the major transition in the approach of the Mexican government to strengthening SMEs was made in 2000 as the Entrepreneurial Development Programme (EDP) was adopted as part of the National Development Plan 2000-2006. The EDP was a national-wide initiative that aimed at the removal of impediments to entrepreneurial activity in general instead of favouring selective intervention as had been done in the past. The "sub ministry" for Small and Medium enterprises (SPYME) was responsible for coordinating the SME related policies. In line with its mandate, SPYME established in 2004 the SME Fund (Fondo PYME) which integrating smaller funds that existed previously. The fund's task is to grants temporary financial support to projects that promote the creation, development, consolidation, productivity and competitiveness of SMEs. In early 2007 a new programme called México Emprende was put in place aiming at establishing centres throughout Mexico that would draw together all implemented SME programmes.

The first group of SME programmes is concerned with opening up access to international markets. The first programme that pursues this aim is the "Impulsora" Programme for Exportable Offer that helps SME exporters to diversify products and export markets. A related sub-programme is the PYMEXporta Centres' Network which helps to developed specific export projects. The second export promotion programme is the Programme for Commercial Mission that uses market studies to identify potential export markets. Furthermore, in late 2007, the federal government also created PROMEXICO, in response of the pressures of SMEs, the weak promotion strategies of FDI, and lack of coordination between local governments and the federal ministries. Its main purpose is to increase Mexican firm participation (especially SMEs) in global markets, through activities that fortify their competitiveness and promote their products and services abroad.. In addition, PROMEXICO will be a coordinating and facilitating body between government entities involved in attracting FDI (mainly federal government ministries) and local governments.

Besides strengthening the presence of SMEs in foreign markets, another key concern of the Mexican SME policies has been facilitating access to finance as the lack of financial resources has been a traditional hindrance to strengthening the competitiveness of SMEs. An important achievement in promoting access to finance has been the National SME Guarantee Programme created in 2001. It provides guarantees for SME credits at reduced cost which are jointly extended by the Ministry of Economy, the major State Development Bank (NAFIN) and commercial banks. Along with the guarantee system, a financial network of independent credit advisors has been established which has helped to improve the quality of SMEs' loan requests..

Other SME policies have emphasized the promotion of innovation and technological development. The programmes that have been put in place since 2000 to assist the process of upgrading of local businesses have focused on the creation of links between SMEs and principal centres of research and technological development, the expansion and the development of business incubators and the facilitation of the operations of business development centres which provide local support services to SMEs.

4.4. Creating TNC-SME linkages

In order to support the creation of business linkages between foreign TNCs and local SMEs, the Mexican government set up centres called *Centros de Articulación Productiva (CAPs).* Traditional mechanisms for promoting linkages are represented by the buyers-suppliers matchmaking events, aimed at creating procurement opportunities for local industries, increasing the awareness of TNCs regarding local linkage prospects and helping foreign firms to identify and select potential suppliers. Additionally, they organize annual SME meetings (*Semana PYME*) to disseminate information on potential suppliers, and procurement events on a regular basis for specific industries, including the auto industry, electronics and public procurement. Large databases of suppliers were developed after these annual meetings, but they became quickly outdated and could never become useful tools to increase local procurement. In 2003, a civil association to promote the consolidation and development of CAPs was created, called *Red Nacional de Articulación Productiva*.

In order to redesign and upgrade the textile value chain, a series of nine *Centros de Design* were also created in the late 1990s in La Laguna (where the largest jeans operation is located), Mexico City, Yucatan, Jalisco, Hidalgo, Aguascalientes, Puebla and Tlaxcala. A group of private counsellors certified by the government was appointed to coordinate the upgrading process and linkage development with TNCs. The counsellors were responsible for negotiating and concluding agreements with foreign firms to develop local suppliers, and implementing consultancy packages for promoting activities, business diagnoses, horizontal cooperation plans and quality certification. The result, however, was not very satisfactory and out of more than 4,515 businesses contacted, only a few signed an agreement.

It is interesting to note that, since the 1970s, the Mexican authorities tried to stimulate local subcontracting, and at that time they created an open information exchange system called *Bolsas de Subcontratación*. The aim of the system was to improve the availability of information for foreign TNCs and local suppliers by making them aware of linkage

opportunities and potential partners. The system organized the business data of small firms into large data banks that were made available to large firms seeking local suppliers. Seven *Bolsas* were created in Monterrey, Aguascalientes, Guadalajara, Querétaro, Pachuca, the Federal District and Puebla. Most of them proved ineffective in forging linkages because they were providing only information through large databases and no other supporting services. The *Bolsas* of Guadalajara, Monterrey and Pachuca, on the contrary, proved to be more successful thanks to their capability to provide specialized and targeted sector services.

For example, the *Bolsa* of Guadalajara, specialized in the metal mechanics industry, provided an up-to-date data bank and organized annual sector fairs. The *Bolsa* of Pachuca developed an information system for subcontracting and set up a state-operated trust supported by two national development banks (*Nacional Financiera* and *Banco Nacional de Comercio Exterior*). The *Bolsa* of Monterrey, was the most successful case. Together with the local business association (CAINTRA), it created a *Centro de Vinculación*, aimed at developing strategic business alliances. The *Centro de Vinculacion* is now able to self-sustain 30- 40 per cent of its total expenses, and provides a set of integrated services including matchmaking, subcontracting agreements and supplier development. In 2005, the supplier catalogue published by the centre, called *Socio Proveedor,* had 135 registered firms. Most of the service users were enterprises located in Texas, U.S., and local firms in the Monterrey area. Once a subcontracting contract was signed, contractors could ask the centre to help them upgrade the suppliers to the required level of productivity and quality.

To cope with SME financial constraints in supplying large public companies, in 2006 NAFIN launched the programme "Cadenas Productivas", a service that offers financing and technical assistance to SMEs to integrate them into domestic value chains by creating linkages between large Mexican enterprises and government entities. In 2007, 64 per cent of NAFIN's resources were dedicated to this programme.

5. Business linkages case studies

The analysis above shows that, in Mexico, small businesses have been a key element in the industrial adjustment process that occurred in response to the globalization and liberalization of the Mexican economy. This section reports the results of two case studies undertaken in technological intermediate and advanced industries, namely electronics and automobiles, which are controlled by large TNCs. They basically show that the potential for upgrading domestic suppliers that are closely tied to foreign companies is successful only if adequate support measures are put in place through the collaborative efforts of both public and private institutions.

5.1. The Guadalajara Electronic Cluster

The electronics industry in Mexico began to develop during the import substitution period. Yet, it only fully expanded to the Mexican Border States when a larger number of foreign TNCs were attracted by the incentives offered under the *maquila*s promotion scheme in the late 1980s. Mexico's signing of NAFTA in 1994 brought a surge of investment from IT and electronics companies looking for a relatively low-cost base from which to export to North America. (Figure 1).

Mexico's IT market value was estimated to be $11.2 billion in 2005 by the United States commercial service, making it the second-largest in Latin America. The hardware industry accounted for $7.3 billion, software for $800 million, and IT services and supplies for $3 billion. There are more than 2,000 IT companies operating in Mexico. The United States, whose supplies enter duty free under the terms of the NAFTA, dominates the market for computer equipment and software. The government is attempting to promote the development of the domestic software and hardware market (currently dominated by imports), as well as a more export-oriented services industry capable of challenging dominant players like India (EIU, 2006).

The electronics cluster of Guadalajara, in the western State of Jalisco, was created in 1990, when a group of 26 TNCs[49], pioneered by IBM, first decided to launch a large operation in the region. In 2005, according to the Ministry of Economy, there were more than 700 firms with electronics manufacturing operations in Guadalajara, accounting for 70 per cent of Mexico's computer production and 95 per cent of telecoms manufacturing in Mexico. Consequently, the electronics cluster of Guadalajara has become a centre for the development of Spanish-language software.

The main economic activities that made up the electronic cluster in Guadalajara were: computer and electronic product manufacturing; software publishers; the manufacturing of metallic products; and electrical equipment, appliances, and component manufacturing. The added value of the cluster is 6.56 million pesos with an annual growth rate of 3.4 per cent since 1999. The labour productivity of the cluster in 2004 was 15,824 pesos per month, per person which represents the second highest of the State. From 1999 to 2004, growth within the cluster actually decreased at an annual rate of 1.6 per cent, losing competitiveness in spite of the exports and value added growth in the sectors. However, this growth trend is expected to be reversed in the long term, as investment in R&D in these sectors grew almost 600 per cent in the same period. Employment in the cluster in 2003 accounted for 43,455 people. Thus, this sector had the biggest share of economically active people, and one of the biggest annual growth rates (21 per cent) in Jalisco. (Figure 2).

IBM and Hewlett-Packard (HP) have served as the core companies of Guadalajara's electronic industry. IBM first set up an assembly factory of typewriters in the region under foreign ownership restrictions in 1964. After thorough negotiations, in 1985 IBM was allowed by the Mexican government to retain 100 per cent ownership of a new plant

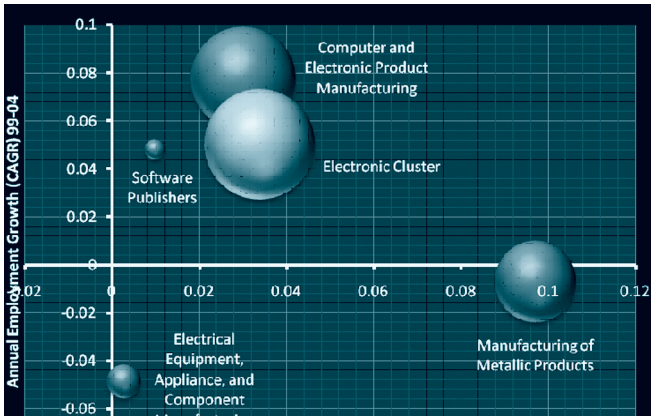
[49] The 26 TNCs were IBM, Hewlett Packard, Eastman Kodak, SCI systems, Motorola, Siemens, NEC, Philips, Intel, Solectron, ATT, Flextronics, CP Clare, Compac, Compusoluciones, Pantera, Cumex Electronics (Cuplex), Solectron, V-Tech, Accurate Box, Telmex, Cherokee, Molex, Coilcraft, ATT- Alestra, Flextronics, Telect, Jabil Circuit, and Mci-Avantel.

Figure 1. Mexico Electronic Network

Source: Based on the 1999 and 2004 INEGI Economic Census.

to be built in Guadalajara. IBM was given an exemption upon the condition that it would invest in the development of a technology centre to train Mexican engineers. The deal resulted in the establishment of the Centro Tecnologico de Semiconductores (CTS), which is a semiconductor research and design centre and also a small business incubator, providing space and equipment for former CTS engineers to start new businesses. After IBM was given full ownership, HP and other TNCs made the same request and received exemptions. The Mexican government, however, did not take advantage of the demonstration effect of the IBM case and did not apply the same conditions to similar requests from other TNCs.

Figure 2. Value added vs. employment growth 1999–2004, Electronic Cluster in Guadalajara



Source: Based on the 1999

In the 1990s, IBM decided to expand its Mexican operations and increase local procurements to face the market expansion following the signing of NAFTA. Since most local firms did not meet the standards required to become IBM suppliers, a two-stage strategy was put in place: IBM invited its global suppliers, many of them well-established and vertically-specialized contract manufacturing providers, to establish their plants in Mexico to form the first-tier supplier base, and encouraged them in turn to develop local firms into second-tier suppliers. IBM convinced several foreign suppliers such as SCI Systems from the U.S. and Yamashita from Japan to open up new plants in Guadalajara. These large global suppliers basically conduct all of the manufacturing activities for IBM, leaving little room for the development of local firms to become first-tier suppliers.

In the 1990s, IBM also restructured its production system and optimized the supply chain to increase efficiency and reduce costs. It removed its own inventory storage and allocated each first-tier supplier a space in its plant to use as a parts unloading site. The operation largely reduced the costs incurred by IBM in logistics and inventory and the idle time spent in parts delivery. The operation enhanced the

relationship between IBM and its existing global suppliers while making it ever more difficult for indigenous firms to participate in its supply chain.

In the second tier of subcontracting firms, a few local producers were involved in improving product design and functionality. For example, local service suppliers were in charge of identifying all defects in the product prototype. However, they could not further develop and strengthen their design expertise due to the lack of specialized skills. IBM claimed that it could not increase local procurement in Mexico because the government did not provide sufficient resources to support supplier development, but relied completely on the efforts of TNCs.[50] Although individual TNCs' initiatives to develop their suppliers enabled some Mexican firms such as Electronica Pantera and Seronic to meet international standards, their scope was limited to few select cases.

Hewlett Packard is another large foreign electronics producer in the Guadalajara area which has set up an International Procurement Operation. The HP Mexican plant was expected to create a competitive advantage for the whole corporation and streamline its supply chain. The establishment of this operation by HP provided excellent opportunities to those local suppliers which were able to meet HP standards to participate in its international production network. HP's supplier base located in Mexico was mainly devoted to the production of cables and power supplies, repair and refractions, the packing of manuals in different languages by export destination, packaging, mechanical assembly, plastic injection molding and metal stamping.

While first tier suppliers were largely represented by global contract manufacturers, in Mexico there was a shortage of local spare parts producers. In 1998, several TNCs, including original equipment manufacturing (OEM) companies and contract manufacturing services (CMS) providers decided to undertake collective action to consolidate their supplier base in the region. They launched a joint programme with the Electronics Business Association (CANIETI), the United Nations Development Programme (UNDP) and the local government to establish a Supplier Development Center named *Cadena Productiva de Electrónica (*CADELEC), specifically targeted at the electronics industry. CADELEC is still funded by the State of Jalisco, the leading electronics OEM and CMS companies, FUNTEC (the National Foundation of Innovation and Technological Transfer to SMEs), and UNDP.

The centre, which has a board of directors made up of the TNC managers, acts as an interface between the industry and the State government to improve the investment and business environment for the industry, including the quality of infrastructure and the availability of subsidies, grants and other incentives. It also participates actively in efforts to promote the electronics cluster in Guadalajara and to attract new investment (e.g. by organizing the Mexitronica exhibition and several related media events). A key objective of CADELEC is to develop an integrated supply chain that connects foreign TNCs (including OEMs and CMSs) to local suppliers.

Although in the early 2000s the consolidation of the local supplier base initiated by CADELEC has led to a radical reorganization of the electronics industry in Guadalajara, and to the closure of a number of plants, this initiative has been very successful in consolidating a critical mass of competitive local suppliers. In 2005, the CADELEC budget for supplier development doubled with respect to the previous year, reaching $7 million. Thanks to the availability of additional funds, CADELEC has introduced a supplier development program that operates on a case-by-case basis. This includes the following steps:

a. Identification of existing or potential suppliers through reverse engineering methods[51];
b. Detailed diagnostic assessment in the area of manufacturing, quality, material logistics, environment, information technologies, marketing, research and development, human capital, finance, strategic planning, and business organization (see table 12);
c. The formulation of specific recommendations on how to improve the company operation, jointly discussed by the business counsellors and the company representatives;
d. The implementation of upgrading measures, mainly aimed at quality certification (ISO international standards, 9000 to 2000);
e. The preparation of a follow-up agenda for the business to be able to work on continuous innovation procedures;
f. The registration and documentation of all activities in a database, so they can be applied in the future to other businesses.

5.2. The Puebla Automobile Cluster

Automotive production is one of the most important manufacturing activities in Mexico. The combination of Mexico's cheap labour, geographic proximity to the United States and NAFTA membership make the country an ideal production base for cars destined for North America. In 2007, the Mexican automotive industry produced about 2.1 million cars (United States commercial service, 2008), including passenger cars, buses and trucks, the majority of which were for export. In general, the productivity of the Mexican automotive industry was relatively low (Industry Canada, 2004). This relative low productivity is the result of two factors: first, the relatively small scale of certain Mexican plants; and second, the deliberate choice of manufacturers to take advantage of lower Mexican labour costs by substituting labour for capital.

[50] For example, SCI and Fuji had to open a technical university to train their suppliers.

[51] In order to identify new and potential local suppliers, reverse engineering methods are applied to analyze the parts and components that could be developed locally, with a focus on the more expensive ones. For example, in the electronics industry the Printed Circuit Board Assembly (PCBA) represents 80 per cent of the product's total cost, and the other 20 per cent comes from different aspects of the production process. Within the assembled board, 85 per cent of its cost comes from assembled electronic components (semiconductors – memories and microprocessors, resistances, etc), another 10 per cent corresponds to the printed circuit board, and the rest of the costs are logistics, warehousing and labour. One of the products targeted by CADELEC was semiconductors. This shows the complexity of procurement development operations and the importance of accurately identifying the components which would allow local producers to climb the value added ladder.

Table 12. CADELEC: Checklist for diagnosis

Type of quality system	Characteristics	Grades
No quality system	No system, not even programmed, or has a system, but planning, documents and execution requires immediate and substantial improvement.	0 -250
Quality system with deficiencies	This control point is adequately planned, although back up documents are inadequate, or execution is not realized as specified in the manual.	215 - 500
Quality system requires improvement	Execution is adequate, but documents are not enough for this control point. Planning for continuous improvement is poor. Planning, documents and execution even if effective, need to be improved.	501 - 700
Satisfactory quality system	Planning, documents and execution are adequate, to insure quality, price and shipments. All requirements are fully accomplished and a continuous improvement process exists at every control point.	701 - 850
World class supplier	All necessary requirements are met and all control points exceed the requirements. Execution and continuous improvement are always in place and innovations are continuous.	850 - 1000

Source: CADELEC web page, August 2005.

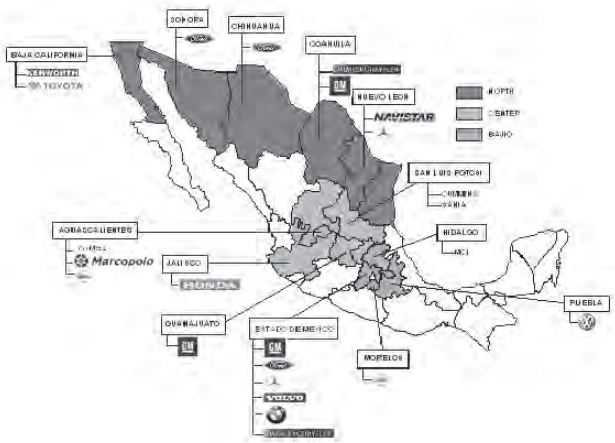
Automotive production in Mexico has traditionally been dominated by foreign TNCs.

The first assembly plants were opened in the 1950s and since then policy makers have applied protectionist policies, such as local content requirements, tariffs barriers and foreign equity restrictions, to shield and foster domestic auto parts producers. After the signature of NAFTA, the Auto Decree that regulated the sector since 1962 (with some revisions in 1977, 1983 and 1989) was abolished and all restrictions removed. (Figure 3).

This liberalization process has left Mexico's auto industry exposed to fluctuating demand in the United States, dominated by the "Big Three" U.S. firms: General Motors (GM), Ford and DaimlerChrysler. Mexico's automotive industry peaked at the same time as the United States' economic cycle in 2000 at 1.9 million vehicles, but dropped in subsequent years to a low of 1.5 million in 2004. In the last few years however, production has recovered and surpassed the two million unit production in 2007.

The elimination of NAFTA local content requirements and the recent implementation of FTAs with the EU and Japan has made Mexico a more attractive base for the production of vehicles by European and Asian producers, both for onward export to the United States and to tap the growing domestic market. These producers are gaining market share at the expense of the United States automakers, and many have large-scale investments planned or in progress. Most significantly, Japan's Nissan is investing $1.3 billion in its Aguascalientes facility to increase output by 70 per cent. This supports the Ministry of the Economy's bullish projections for automotive production in the medium term. The ministry estimated FDI in the sector to be $3 billion in 2006, and projects that Mexican production will attain by 2010 3.5 million. However, it must be kept in mind that Mexican production is closely intertwined with the United States market and will probably be negatively affected if the economic downturn deteriorates.

Figure 3. Mexico Automotive Industry Clusters



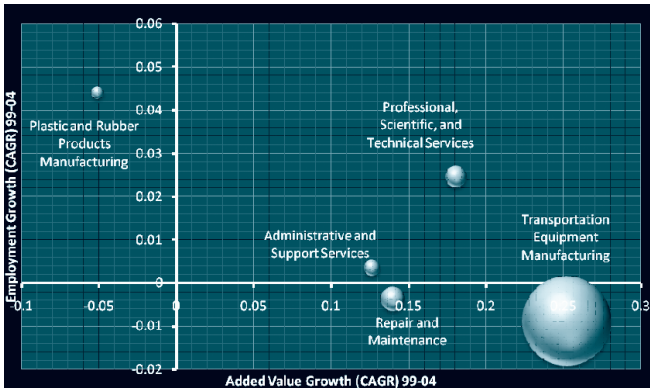
Source: Ministry of Economy, 2004.

The presence of foreign producers has made the Mexican automotive sector very dependent on foreign industry and expertise. Moreover, the patterns and magnitude of the local suppliers' networks differ substantially for each assembler. Volkswagen, for example, is the TNC with the highest number of Mexican suppliers, followed by General Motors, Chrysler and Ford. In 2005, the Volkswagen auto production represented the second largest in the country (i.e. 300,656 units), after that of the Japanese assembler Nissan. Thus, a considerable challenge is to strengthen the local suppliers' chain for the industry in order to create more local business and know-how.

The centre of Mexico's automotive industry is situated in the State of Puebla. Puebla's automotive cluster is the economic activity that produces the highest value added (four times the amount of the second highest economic activity). The average wage of the cluster is 13,865 pesos per month compared to the average wage of 3,000 pesos per month. Labour productivity is extremely high, accounting for 90,000 pesos, per person, per month and it is growing at an annual rate of 26 per cent. But the high performance of this cluster and the high wages of its workers are not mirrored in the performance and wages for cluster related activities[52]. The labour productivity for these activities is extremely low compared with that of the automobile sector and the monthly remuneration for workers in these activities ranges from 1,150 pesos for reparation and maintenance services to 5,590 pesos for business services.

[52] The procedure to identify economic related activities is based on the paper "*Agrupamientos económicos del sector industrial en M xico*", by Dr. Alejandro Dávila Flores from the Ministry of Economy. The methodology uses Location Coeficients and the input/output Matrix of the economic activities of Guadalajara to determine the linkages between activities.

Figure 4. Value added vs. employment growth 1999–2004, Automobile Cluster and Related Activities in Puebla



Source: Data based on the 1999 and 2004 Economic Census, INEGI.

The automotive cluster in the State of Puebla has been set up around the Volkswagen plant. The history of Volkswagen in Mexico dates back to the post-war period, when Volkswagen imported some cars into the country for the exhibition "Germany and its industry". The demand for Volkswagen cars turned out to be so high that the company decided to start assembling cars on site. In 1962, Volkswagen opened a factory in Xalostoc, and in 1967, encouraged by a growing domestic demand and the import substitution policy of Mexico, it opened a second factory in Puebla.

When Volkswagen established its first plant in Mexico in 1962, most of the Mexican suppliers did not meet the quality and capacity requirements to enter its global supply chain. The company, therefore, convinced some global suppliers to establish their plants nearby the Puebla factory. These too had to operate under the foreign equity and local content restrictions, thus necessarily established certain linkages with domestic partners. In order to facilitate the process, a core group of first tier foreign and domestic suppliers decided to locate their plants in the industrial park "Volkswagen FINSA", around which several Mexican second and third tier suppliers were operating. A few years later, a number of Mexican second and third-tier suppliers also started to operate in the nearby State of Tlaxcala, where an industrial park had been purposefully created by the local government. In 2005, FINSA park hosted 27 suppliers (25 international and 2 domestic companies), employing around 6,500 workers. In Tlaxcala, the park hosted 56 second and third-tier suppliers, employing more than 150,000 workers.

Until the 1980s, Volkswagen's operations in Mexico were mainly aimed at producing simple and compact car models almost exclusively for the large but highly protected Mexican market. The quality standards required for these domestic models were relatively low compared to those required for international markets. Although some adjustments were needed to adapt the standard models to specific local requirements, the technology employed in the process was quite simple. Therefore, there was a relatively large technology and productivity gap between Volkswagen's Mexican operations and its European plants. Nevertheless, the Volkswagen Sedan or "Beetle" produced in the Puebla plant became one of the most popular cars in Mexico, and in 1981 represented nearly a quarter of Mexico's national production of vehicles.

In 1982, the Mexican debt crisis and the new export-oriented industrial policy made caused Volkswagen shift its attention from the Mexican internal market to exports, mainly to the North American market, including the United States and Canada. This meant that the Puebla plant had to be quickly upgraded to meet international quality and environmental standards such as ISO 9002:94, ISO 9001:2000, VDA 6.1, KBA (EWG 70/156) and the "Clean Plant" certification. A regional development strategy was introduced for all Volkswagen plants in Latin America based on the technological level of each plant, the size of the market and the export restrictions of individual countries. A massive restructuring process was launched in Volkswagen Puebla accordingly.

The availability of a relatively well-developed infrastructure and transportation facilities, the proximity to the United States market and the signature of the NAFTA agreement enabled the Volkswagen Puebla plant to become a key production site in Latin America. New models were introduced, and the plant was re-oriented towards producing parts and components for exports, even though it still maintained a small amount of production for the domestic market. After the closure of Volkswagen plants in the U.S. at the end of the 1980s the Puebla plant became strategically even more important, since it represented the only plant in the group that was still operating in the NAFTA zone (see table 13). The bulk of lower technology models, meant to service other Latin American countries, were allocated to the Brazilian plants.

Table 13. VW Puebla export platform

	2005	%	2006	%
United States/Canada	167,114	69	152,472	54
Europe	64,145	26	24,966	9
South America	11,237	5	104,589	37
Total	242,496	100	282,027	100

Source: Volkswagen webpage.

The other distinct element of this restructuring process was the outsourcing of manufacturing to a new network of suppliers. In the past the supplier network depended on imports and purchases from the plants located in central Mexico. In restructuring for export production the company turned to transnational auto part suppliers who formed a cluster around Puebla plant and along the highway in a radius of up to 40 kilometres.

It should be noted that, despite the introduction of new models, the Puebla plant as well as its local suppliers have never been involved in Volkswagen's significant R&D activities, since both the highly standardized model design and the R&D activities were handled at the headquarters in Germany. The main incentive for local upgrading was rather represented by the pressure to improve productivity, quality and flexibility, which steadily increased. At the beginning of the 1990s, Volkswagen created a Supplier Development Area for coordinating local sourcing, supported by a training

institute and a B2B electronic platform operating through local purchasing teams. Since then, the B2B platform makes available information on Volkswagen standards and procedures to all companies willing to become its suppliers.

It is interesting to note that a survey carried out in 2004 on a select number of Volkswagen suppliers revealed that they shared some common characteristics, namely : they were mainly medium sized businesses; they supplied diversified products; they got most of their input from foreign sources; they were constantly encouraged to upgrade; they often attended shop-floor training; they complied with all environmental standards required by Volkswagen; they operated on a short-term contract basis because Volkswagen does not offer long-term contracts to its suppliers and they gained benefits from entering into the Volkswagen supplier group in terms of an increase in size as well as profits and business stability.

6. Lessons learned and recommendations

Based on the findings of both desk research and of the case studies on the auto and electronics sectors, this study has made an attempt to analyze the experience of Mexico in creating TNC-SME linkages. The main lessons can be summarized as follows:

Stimulating technology spillovers from FDI

- Mexico has faced several difficulties in exploiting the potential benefits of technological spillovers from foreign investment. For example, in the Guadalajara electronics cluster TNCs stimulated little technological dynamism on the part of local SME suppliers. The government was able to introduce measures to promote TNCs' involvement in local technological development only in limited occasions (e.g. the IBM case). The Guadalajara case shows that the domestic supplier base can be upgraded only if adequate support measures are put in place through collaborative efforts by both public and private institutions. These comprise setting up institutions for research, metrology, standardization, testing and quality assurance as well as appropriate incentive systems to link SMEs to universities and research centres. Moreover, funding schemes are needed to encourage SMEs to acquire new technologies and invest in R&D.

Meeting environmental and quality standards

- TNCs may become a key driver of technological development and the quality upgrading of an industry as a whole. For example, in the early 1990s Volkswagen imposed higher environmental rules and requested its suppliers in Puebla to become certified as clean plants by the SGS European Quality Certification Institute. There is no doubt that such quality improvements had positive side effects on the economy, despite the initial pressure they put on local producers. The development of new environmental standards provided access the U.S. export market for the first time. Additionally, when the number of defects in production was reduced to comply with international ISO certification, Volkswagen–Mexico started producing much more sophisticated models.

Supporting second and third-tier suppliers through technology parks

- In high and intermediate technology sectors, such as automobile and electronics, global restructuring processes have led to a drastic reduction of the number of first-tier local suppliers. In the case of the Volkswagen plant in Puebla, most first tier suppliers form part of a select group of foreign TNCs that followed suit of Volkswagen investment in 1962. Since then, information exchange and technology transfer took place mainly within this core group of first-tier suppliers and Volkswagen. Local second or lower-tier suppliers have often appeared isolated or left out of the upgrading process. Through the creation of specialized technology parks in close proximity of existing TNCs, the regional governments in both Puebla and Tlaxcala have managed to upgrade the region's human capital and promote more technological spillovers to indigenous firms, in particular suppliers in lower tiers of the supply chain.

Achieving collective learning through cluster development

- The presence of SME clusters can play a fundamental role in developing a local multi-tier supplier network and embedding FDI in the long term. In Guadalajara, for example, training was provided inside the cluster through formal programmes and informal exchanges. In Puebla, Volkswagen established a training center (Instituto para Formación y Desarrollo) to improve the management and technical skills of local suppliers, in order to upgrade specific production processes and raise labour standards. The establishment of clusters may represent an effective way to better integrate local suppliers into global value chains, and enable smaller businesses to upgrade through collaborative activities and collective learning to better cope with foreign competition.

Providing specialized services for creating TNC-SME linkages

- Establishing matchmaking mechanisms is a necessary but insufficient step to promote TNC-SME linkages. The experience of the Mexican Bolsas de Subcontratación and Centros de Articulación Productiva shows that the centres that simply provided information on potential partners were the least successful in promoting linkages. Those that provided a comprehensive range of services

better responded to the needs of both TNCs and local SMEs. Their success was strictly related to their capacity to support the entire linkages process efficiently and to provide follow-up services to all operations. Specialized services included, among others, creating strategic alliances with firms, offering advice on contractual arrangements, assisting small firms in preparing business proposals, organizing joint bids, and carrying out special supplier development projects.

Meeting private sectors needs through business associations

- Business associations can play a key role in promoting and supporting local economic development. In Mexico, business associations have been very active in providing support services at the regional level, including training, accounting and information systems, and often worked in cooperation with the local supplier development centres. Northern and central regions have been more active in this process, and sometimes business associations have played a key role in the industrial development of the whole region. A notable example is that of Monterrey, where the local business association CAINTRA collaborated with the Bolsa de Subcontratación in the creation of the so-called Centro de Vinculación, to provide a set of comprehensive services to support subcontracting and strategic alliances of electronics firms in the region.

Promoting regional economic development

- Due to the lack of support measures at the national level, it may become crucial to decentralize the focus of intervention from the national to the regional or State level. Several Mexican States, such as Jalisco, Aguascalientes, Puebla and Tlaxcala, have adopted effective measures to attract investment and develop local enterprises in new and dynamic sectors. Among the most successful cases of FDI based export growth of non-traditional products, the production of flat TV screens in Mexicali and of medical equipment in Tijuana can be named. This shows the importance of regional development strategies, in the absence of strong national policies, to cope with the challenges of rapid trade liberalization and increased global competition in sustaining the economic development of the country.

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Chapter VI

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN SOUTH AFRICA[53]

1. Introduction

Since its first democratic elections in 1994, South Africa has moved rapidly towards increased economic integration into the global economy. During South Africa's first decade of democracy, the Government carried out a wide-ranging economic restructuring process and identified the growth of foreign direct investment (FDI) as core to its strategy. Together with greater export orientation, the South African Government has also sought to encourage growth in the local small and medium-sized enterprise sector through a range of supply-side support measures. These have been matched by a series of reforms aimed at encouraging the growth of historically disadvantaged black firms and emerging black entrepreneurs.

This report begins with an overview of the South African economic and investment context and is followed by a closer analysis of policies and programmes of direct and indirect relevance to the creation of business linkages between SMEs and transnational corporations. Two selected case studies examine the commitment to small business development of large TNCs in Richards Bay and in the Durban Auto Cluster, both located in the Kwa-Zulu Natal Province. The study addresses some of the main issues that have arisen with regard to TNC-SME linkages. These are related to the role of corporate social investment (CSI), to the need for new forms of partnership and governance of cooperative processes, and to the complementary roles of different government levels. The report concludes with some reflections on the lessons learned from the South African experience.

2. Economic backdrop

Since 1994, the South African economy has been characterized by stability and a gradual improvement of key indicators related to growth, inflation and manufacturing exports. In 2006, the South African economy registered five per cent real GDP growth, making it the third consecutive calendar year of around five per cent growth. At the same time, however, the country ranked well below the top developing countries growth performers, and, with its history of exploitation and oppression under Apartheid, still suffered from deep and widespread poverty and growing levels of unemployment and underemployment.

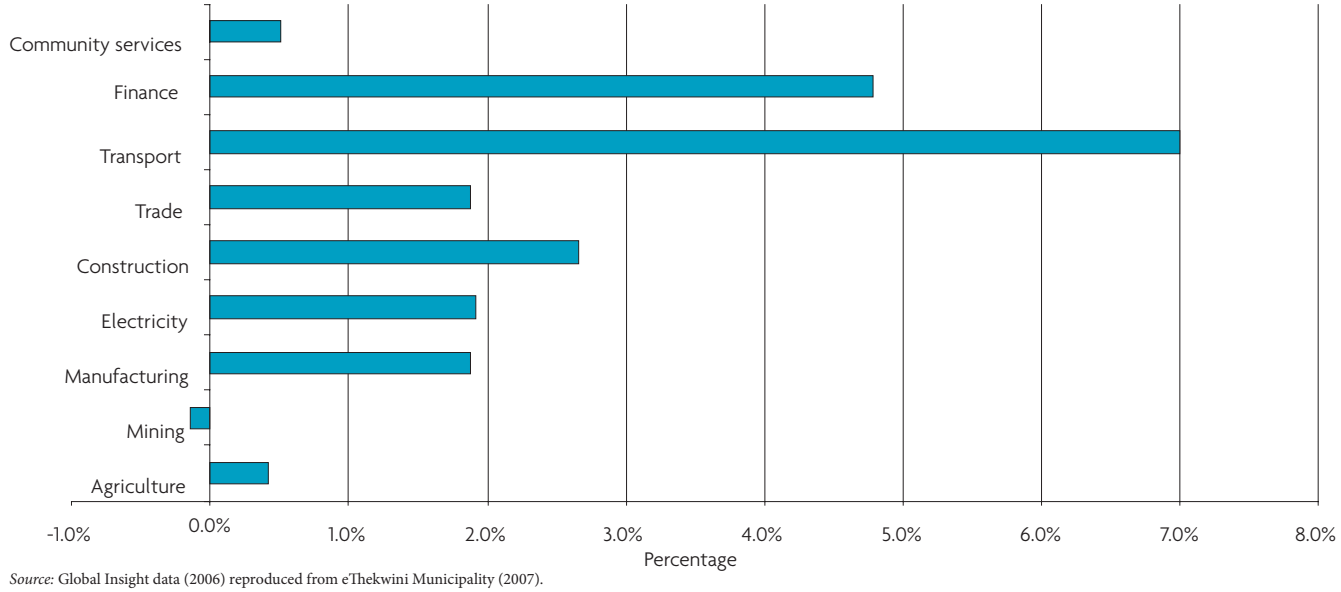
Figure 1 provides an indication of the main sectors that have contributed to this growth performance between 1996 and 2006. Of some significance has been the declining contribution to GDP of the mining sector, once the dominant sector in the economy, although recent commodity price increases in minerals and metals has seen the sector regain importance in the composition of national exports. The figure also provides some evidence of the growing importance of the services sector, and in particular of the increasing contribution of financial services to the country's Gross Value Added (GVA). The transport sector has also grown, reflecting the country's relatively strong position in exports and trade infrastructure relative to the rest of the continent.

South Africa's economic performance has been increasingly influenced by its trade relations. The country has shifted to greater integration into the global economy through export oriented and trade liberalization policies. In relation to export performance, the main driver has been the manufacturing sector, although services have also begun to be of some significance. The automotive sector in particular has been a key element of South Africa's export growth, which reached 30.8 per cent of GDP in 2007 (IMF, 2007). In 1996-2006, South Africa also exported manufactured products such as chemical wood pulp, ferroalloys, semi-finished iron and steel products, machinery, and a variety of food products.

South Africa has also become a key investor in many of these sectors in other parts of African continent, as well as becoming a key trader. Examples include the investment in cellular communications infrastructure and distribution of South African fast moving consumer goods through branded South African retail channels. The recent example of Barclays Plc of the United Kingdom buying a majority stake in the South African banking and financial services group, ABSA, reflects the interest shown in South Africa as an investment

[53] This chapter is based on a report prepared for UNCTAD by Glen Robbins, School of Development Studies, University of KwaZulu-Natal, Durban, South Africa.

Figure 1. Gross value added sectoral growth in South African, *in constant 1995 prices* **(1996-2006)**



Source: Global Insight data (2006) reproduced from eThekwini Municipality (2007).

location, but also in terms of its potential pivotal role as a hub to access the rest of sub-Saharan Africa.

Overall, the Government's efforts to improve health and education standards and address the most basic needs of disadvantaged sections of the country's population have had an impact on human development prospects. However, the improvement in the Human Development Index (HDI) has not been matched by a reduction in the country's very high level of inequality – still amongst the highest levels of inequality of any country in the world. In this context, the South African Government refers to the existence of a "dual economy", one growing, modern, formal and globally connected and the other informal, substance-based and trapped in poverty and unemployment. In this context, development prospects have been severely hampered by the challenges of the HIV and AIDS pandemic.

The creation of SMEs has traditionally been considered an effective response to the problem of unemployment. A range of surveys have tried to estimate the contribution of SMEs to South Africa's economy both in terms of employment creation and in terms of contribution to GDP. According to the Ntsika Enterprise Promotion Agency, in 2006 small businesses contributed 13.9 per cent and medium businesses 15.1 per cent to South Africa's GDP. Berry *et al.* (2002) refers to work by Abedian (2000) in presenting estimates on the contribution of SMEs by various sectors to gross fixed capital formation. Of significance in these estimates is that SMEs contribute 40 per cent of manufacturing's contribution to Gross Domestic Fixed Investment, 20 per cent to transport and 20 per cent to finance (Berry et al., 2002).

3. Recent FDI trends

South Africa does not feature amongst the most significant developing countries that are recipients of FDI flows. According to UNCTAD's Inward FDI Performance Index presented in the World Investment Report 2007, in 2006 South Africa ranked well below its potential at 120th position; this placed it above India (133), but below Malaysia (62), Mexico (82) and Uganda (77). Table 1 provides a summary of inward FDI flows to South Africa between 2000 and 2006. The country received an average of $700 million in FDI per year between 2000 and 2006, with peak years in 2001 and 2005 as a result of important mergers and acquisitions. The negative FDI inflows registered in 2006 were caused by the sale of a foreign equity stake by a domestic gold-mining company to a local firm.

Table 1. South African Foreign Direct Investment Inflows, *(in US$ millions)* **(2000-2006)**

2000	2001	2002	2003	2004	2005	2006
888	6,789*	757	762	799	6,251**	-323

Source : UNCTAD (2007).
* Heavily influenced by the delisting of diamond mining giant De Beers.
** Heavily influenced by the acquisition of the Amalgamated Bank of South Africa by Barclays Bank Plc.

A survey carried out in 2004 by the Edge Institute and the University of London's Centre for New and Emerging Markets provides some interesting insights into the dynamics of FDI into South Africa. The survey includes a sample of over 162 firms with substantial foreign business operations in the country. Eighty-seven per cent of the firms had parent companies in developed economies, mostly in Europe but also in North America and East Asia. From a sectoral perspective, there were significant concentrations in financial and business services (33), machinery and equipment (31), intermediate goods (27), basic consumer goods (21) and infrastructure and construction (19). The importance of the South African operations to the global business of the parent companies varied from sector to sector: on average their importance was very limited in financial and business services, and very large in the primary sector. Finally, the key factors influencing investment choices in South Africa included managerial capabilities, together with established brands and appropriate technology.

Table 2. Distribution by entry mode by affiliate size in 2003 *(as a of employment category)*

Employees	Green-field	Acquisition	oint venture	Partial acquisition	Number of firms
10-50	38	22	31	9	55
51-100	43	27	10	20	30
101-250	20	50	23	7	30
251-1000	29	39	21	11	28
More than 1000	0	27	27	47	15
All Sizes	30	32	23	15	
No. of Firms	48	50	37	23	158

Source: Black and Gelb (2004).

According to the data provided by Black and Gelb (2004), in 2003 the mode of entry of foreign affiliates in South Africa (by employment size category) varied enormously. In the class of 10-50 employees, greenfield investment was the preferred mode followed by joint ventures. The dominance of greenfield projects was also registered in the 51-100 class, followed by acquisitions. In the 101-250 class, acquisitions dominated. Ultimately, it emerges that the larger the required labour force of any operation, the greater the influence on the mode of entry is likely to be, with risk-reducing partnerships becoming more important as employment size increases.

The United States and the United Kingdom are responsible for the bulk of FDI into South Africa, followed by Switzerland, Malaysia, Ireland, Australia, Germany, Japan, China and Canada (Black and Gelb, 2004). In some cases a few large deals have underpinned investment flows (e.g. Malaysia), whilst in others it has been a host of smaller investments (e.g. China). In value terms, FDI has been focused largely on natural resource-seeking and market-seeking operations. These have included investments in oil and energy, food and beverages and telecommunications. More recently there has been some growth of investment in financial and business services. The example of Barclays Plc buying ABSA Bank has been cited above, and there is also a growing number of cases of business services outsourcing, such as the Lufthansa Call Centre. However, overall four sectors have dominated in the past ten years: energy and oil; automotive; food and beverages; and hotels, leisure and gaming. Late in 2007, the Industrial and Commercial Bank of China, the world's largest bank by market capitalization, announced the acquisition of a 20 per cent share (at an estimated cost of $5.5 billion) in the Standard Bank Group,[54] raising total foreign ownership in the bank from around 25 to 40 per cent (http://www.standardbank.co.za).

In assessing the reasons for South Africa's under-performance, it is worth noting that its rating in the World Competitiveness Report 2006 (IMD, 2006) has moved up from 49th place to 46th place, thanks to a positive assessment of its infrastructure, levels of governance and general macro-economic management. Recent GDP growth rates climbing to five per cent in some quarters in 2007, as well as a boost to minerals exports in recent years, has made the country an attractive destination for financial flows. However, despite recent national programmes such a the Accelerated Shared Growth Initiative for South Africa, a series of factors continue to lead a sub-optimal rating of South Africa as a destination for FDI, these include:

- A relatively small market;
- A legacy of low levels of domestic GDFI;
- A high crime rate;
- The unavailability of skills and complexity of immigration systems;
- The relatively high cost of capital;
- An inflexible labour regime;
- Regulatory uncertainty and poor levels of domestic confidence;
- An inability to finance major projects locally.

Recent shortfalls in the availability of electricity have also contributed to concerns around short to medium-term investment prospects.

4. The policy framework

South Africa's first democratic elections in 1994 heralded a comprehensive re-alignment of the country and repositioned its policy framework from one based on the import-substitution industrialization model to one based on the export-oriented model. A raft of measures that had operated for many years in support of the Apartheid system were removed – many of them singled-out not only for their historic role in entrenching racial inequality, but also for having distorting effects on overall economic performance. Since then, the stability of the macro-economic fundamentals has been matched only by a handful of other countries in the developing world, the government deficit has reached levels close to those of industrialized countries (in the range of three to four per cent), and the currency is being left to find its own level in international markets. The following sections describe in detail the main components of the new government's approach after the 1994 elections.

4.1. Improving the business environment and the investment climate

The overall policy approach of the South African Government is delineated in the Growth, Employment and Redistribution (GEAR) framework, which has guided economic policy direction in the country since its approval by the Cabinet in 1996. GEAR, as it became widely known, recommended the pursuit of prudent macro-economic policies with a strong monetary policy focused on reducing inflation and fiscal restraint. This relatively orthodox approach was complemented by a commitment to economic openness, including a reduction in exchange rate interventions, a commitment to the liberalization agenda articulated by the Uruguay Round of the General Agreement of Trade and Tariffs (GATT), and the ongoing elimination of industrial policy interventions. According to Barnes *at al.* (2003):

[54] The Standard Bank Group is South Africa's largest banking group by assets and earnings.

> *"The logic of this was to force domestic industry to sharpen its competitiveness and to reduce the cost of inputs for user-industries. Insofar as export subsidies were concerned, these were removed since they were very costly (the value of subsidies was approximately 0.5 percent of GDP at their high point in the mid 1990s), were subject to growing corruption, and were anyway becoming GATT-illegal".*

The Government also took a close look at policies to attract FDI, and particularly policies aimed at promoting investment climate reform in South Africa**.** The factors that could have an impact on FDI were singled-out, as well as measures to address existing constraints. For example, it was decided that a Presidential Investment Council should be established to promote dialogue with foreign investors. To this end, the Council brought together key global business leaders (including some South Africans) to advise the President on improving the investment environment. This was done under the framework of the International Marketing Council.

In the late 1990s, the Government also launched the Black Economic Empowerment (BEE) initiative. Influenced in part by the Malaysian *Bumiputra* experience, the government sought to address severe inequalities in business ownership and management through a variety of measures. Whilst the initial focus was on public procurement reform and on so-called "BEE deals" in the corporate sector, the first assessment report of the Black Economic Empowerment Commission, carried out in 2000, led to a more pragmatic and prescriptive approach. It was felt that the pace of the BEE had been too slow and in many cases had only benefited a narrow group of emerging black entrepreneurs.

The key recommendation of the Commission's report was that all industry sectors should adopt an **Empowerment Charter** and use a common framework, guidelines and definitions. Consequently, major industry players have in recent years sought to negotiate such "Charters" in sectors as diverse as agriculture and agro-processing, mining, financial services and information technology. As a result many TNCs across the country began to make time-bound commitments, including the shareholding of local operations, representation at management and technical levels and relationships with suppliers and distributors. The legislation on equity in the workplace reinforced these commitments, and the Commission recommended that the Cabinet should only intervene in cases where there was inadequate commitment and/or when progress was too slow.

Although the focus of the Charters is not necessarily on TNC-SME linkage creation as such, they nonetheless represent an interesting tool for both their direct and indirect impacts on TNC-SME linkages. As the Charters are still relatively new, no comprehensive analysis has been conducted on their effectiveness. Nevertheless, there is considerable evidence of a renewed thrust by firms to ensure changes in their ownership patterns and to a series of other empowerment-related endeavours, such as appointing new management, embracing employee share ownership schemes and increasing procurement from other "empowered" firms. For example, as a result of the charter-related processes, a company like Microsoft has increased the number of its black-owned and managed service providers and retailers. Microsoft's web site affirms that:

> *"For Microsoft South Africa empowerment isn't just about doing the right thing; it is good business practice… Microsoft South Africa has been an early advocate for the need for transformation within the ICT industry. By playing an active role in the development of the ICT Charter the company believes that it can help bring the benefits of information technology to all individuals and communities within South Africa". (http://www.microsoft.com/southafrica/)*

4.2. Attracting FDI strategically

In South Africa, all business sectors are open to foreign investors and no formal approval is required. Additionally, the Government has adopted several incentives for attracting potential investors to the country. In particular, to encourage investors to establish or relocate their activities to decentralized areas, the country's various regions and provinces offer several incentives, including: reduced interest rates, reduced rentals for land and buildings, cash grants for relocation of plant and employees, reduced rates for basic facilities, transport rebates and assistance in the provision of housing for workers. Additionally, exporters are granted incentives, such as export marketing assistance, zero rating for value added tax on exports of goods and services, and relief from various customs and excise duties.

In the field of FDI attraction, the Department of Trade and Industry (DTI) has developed a package of incentives that are provided under the following two schemes:

- The Foreign Investment Grant (FIG) – This is a cash grant scheme aimed at attracting new investments in manufacturing and encouraging relocations of plants from abroad to South Africa, thereby promoting the transfer of new technology to the country. The FIG covers equipment and management relocation costs and up to 15 per cent of the costs of new machinery and equipment (up to a maximum of R3 million per entity). The qualifying criteria for the incentive scheme are: (a) foreign investors who hold at least 50 per cent of the shares in the relevant enterprise; (b) business engaged in manufacturing; (c) new qualifying investments; (d) registered, incorporated, legal enterprises registered in South Africa; and (e) businesses that qualify for the Small, Medium Enterprise Development Programme.

- The Strategic Investment Programme (SIP) – In very special cases, the DTI has considered providing other incentives to major investors whose activities are likely to have a lasting positive impact on the economy (e.g. through boosting foreign exchange earnings by increased exports). The SIP is a R3 billion incentive package, which entails tax allowances of either 50 or 100 per cent of an approved investment. It is accessible to strategic industrial projects operating in the following sectors: (a) all manufacturing activities, excluding tobacco and tobacco related products; (b) computer and computer related activities (such as hardware consultancy, software consultancy and supply, data processing, but excluding standard secretarial services); (c) research and development activities, including research and experimental development on natural sciences and engineering. In terms of qualifying criteria, the proposed project should: comprise investment in new qualifying assets equal to or exceeding R50 million; increase annual production of the relevant industry sector within South Africa; not substantially displace products or jobs in the relevant sectors; demonstrate long-term commercial viability; promote employment and production in the same economic sector in which the project is to be established; and not concurrently be benefiting from certain other schemes as per the relevant legislation.

In terms of attracting targeted FDI, one of the most remarkable successes of DTI was in the automotive sector, where a sustainable inflow of FDI was attracted thanks to two main sectoral support measures: the Productive Asset Allowance (PSA) and the Motor Industry Development Programme (MIDP). In particular, the MIDP sought to encourage the consolidation of domestic auto production around a reduced range of vehicles that would be able to reach sufficient export scale. The assemblers exporting such vehicles would then be entitled to earn duty credits to import a greater range of models produced internationally. This made it possible to integrate South Africa into international automobile value chains, follows decades during which its production had either been under licence or viewed as marginal to core global operations.

Efforts to target FDI have also been made in other sectors, through so-called Customized Sector Support Programmes, but these have had mixed results. For instance, in the telecommunications sector the introduction of cellular licences has had an enormous impact on the business community and has spurred the creation of businesses on both the retail and service/technology ends of the spectrum. However, the slow pace in deregulation of the fixed-line operator environment and the related high costs of telecommunications bandwidth have resulted in a relatively limited beneficial impact of FDI on domestic business.

4.3. Strengthening the absorptive capacity

Overall, the new policy framework described above has been crucial in raising foreign investment levels in a context where domestic savings was relatively low. However, Barnes *et al.* (2003) point out that:

> *"The revision of the FDI policy measures did not signify a withdrawal of the government from industrial policy. From the early 1990s, the government-in-waiting had begun a process of enquiry which ultimately resulted in a new industrial strategy. The upshot of this programme was a series of "supply-sided measures"[55] designed to promote the adoption of world class manufacturing capabilities".*

In this framework, the Government, through the DTI, made a public commitment to support the development of the Small, Medium and Micro Enterprise Sector (SMMEs). A **White Paper on Small Business Development** was finalized in 1995 after a series of national and provincial Presidential Conferences. The White Paper argued that the presence of small business in the economy had been undermined by the economic exclusion policies of Apartheid and by the biases of national programmes in favour of large, often capital intensive, economic activities. In stark contrast to these past policies, the Government decided to encourage small business development and enhance prospects for small business formation and survival. This was expected to have multiple benefits in terms of improving the competitiveness of the economy, raising levels of employment at a rate the larger enterprises would not be able to match and empowering entrepreneurs to generate an income in a context of severe poverty.

The White Paper proposed a number of measures to develop the SMME sector in the country. These included the rolling out of a network of support institutions at the local level that would provide SMMEs with access to business development support and to capital through the financial markets. The White Paper also encouraged the government to adjust its procurement activities to enable small businesses to access this opportunity. Particular focus was placed on those businesses that were either managed or owned by formally disadvantaged members of the black community, as well as those owned and managed by women and the disabled.

The initiatives around the White Paper were further supported by the commitment to promote opportunities for the interests of SMMEs to be represented in trade negotiations, protected by the application of competition policies. Other measures included support to SMMEs in accessing new markets through programmes such as the Export Marketing Assistance programme, which offered higher levels of support to SMEs wishing to test demand for their products in potential export markets.

[55] These measures included: the promotion of technological capabilities through measures such as R&D subsidies, the Technology and Human Resources for Industry Programme (THRIP); support to firms aiming at the adoption of World Class Manufacturing through the Competitiveness Fund; support to firms working to achieve collective efficiency in the form of the Sector Partnership Fund; programmes to assist in the adoption of new progressive labour processes; and schemes to promote industrial training (Barnes *et al*, 2003).

Although not initially a consequence of the White Paper itself, the Government later converted the Department of Trade and Industry's (DTI) small business desk into the **Ntsika National Enterprise Promotion Agency** – directly reporting to the DTI, but operating under its own Board representing small business interests. Ntsika decided to backstop the network of business support agencies, known as **Local Business Support Centres,** as its operational arm**,** by raising their capabilities and facilitating access to their services by a larger number of SMMEs. Additionally, as Ntsika became more consolidated (the Agency suffered considerable levels of staff turnover in its initial years), it began to play a greater role in working with other divisions and agencies in the DTI, with the goal of making their activities more SME friendly. This included, for instance, making recommendations on involving SMEs in trade development activities, working with officials from the investment promotion agency to encourage investors to consider building linkages with local SMEs, and designing grant programmes in support of SMEs. In order to consolidate these activities even further, in 2006 Ntsika was merged with the National Manufacturing Advisory Centre (NAMAC), and became known as the **Small Enterprise Development Agency (**www.seda.org.za).

The scope and scale of the DTI's programmes during the 2005/2006 financial year is reflected in the budget breakdown presented in Table 3. The table gives some indication of the level of investment in key programmes of the DTI.

4.4. Creating TNC-SME linkages

Since the late 1990s, the development of TNC-SME linkages was given a degree of emphasis in DTI's activities largely as a component of other programmes, which were in turn inspired by the experience of countries such as Ireland, Singapore and Malaysia. First and foremost, the DTI decided to create the Trade and Investment South Africa (TISA), a new agency meant to facilitate FDI and to market the country as an investment destination. In the past, TISA has been very active in encouraging foreign buyers to purchase South African products and services, as well as in encouraging existing and potential investors to create linkages with the SMMEs. In collaboration with Ntsika, TISA has been also active in identifying potential export markets for SMMEs and in easing their access to global value chains. Finally, TISA has worked with the DTI in organizing the annual South African International Trade Exhibition (SAITEX), representing an ideal platform for South African firms to display their products and capabilities to an international audience and to seek potential business linkage opportunities.

Apart from TISA's activities, a variety of other DTI measures aimed at SMME development had a direct or indirect impact on the creation of business linkages, namely:

- The *Market Access and Business Linkages (MBL) Programme* sought to support business linkage formation with small businesses, regardless of whether such linkages would be domestic or international. Funding for the programme came largely from the European Union (R50 million over a four-year period). The key conduit for such support was through consultancy services provided by the Local Business Service Centres. Former staff working on the programme reported that, thanks to this initiative, linkages for a value of more than R100 million a year were established. The programme, however, came to an end in March 2004 despite its relative success, and TISA is considering taking over some aspects of the programme again.
- Under DTI's *Manufacturing Advisory Programme*, a number of regional Manufacturing Advisory Centres (MACs) were created, aimed at providing relevant consulting services to SMMEs. These included services aimed at creating linkages with TNCs, such as TNC mentorship programmes, or programmes for accessing licensed technology. Additionally, a number of technology-related incubators were supported, such as the Bandwidth Barn in Cape Town and the SmartXchange in Durban, and were used to facilitate the creation of technology-related businesses and linkages with potentially large customers, such as Siemens and Microsoft.

Table 3. DTI expenditure by main programmes in 2005 2006

Programme	Number of enterprises supported	Expenditure (millions of Rand)
SMEDP – Small and Medium Enterprise Development Programme	3,221	353,997
RIDP – Regional Industrial Development Programme	53	16,1
SMMDP – Small and Medium Manufacturing Development Programme	1,238	100,389
Subtotal	4,512	454,402
CF – Competitiveness Fund	391	21,998
SPF – Sectoral Partnership Fund	64	15,864
BBSDP – Black Business Supplier Development Programme	210	2,781
Subtotal	665	40,643
Critical Infrastructure Programme	7	168,837
Strategic Investment Programme	15	n.a.
IDZ – Industrial Development Zones	1	1,97
Total	5,200	681,722

Source: DTI (2006): 25.

- The *Spatial Development Initiatives* (SDIs) were adopted in the mid-1990s to build investment confidence, focus government attention and unblock obstacles to new investment, in particular related to infrastructure development. Specialist teams were set up to prepare a plan of activities and assess the need for public investment by different ministries. As illustrated later in the case study on Richards Bay, some SDIs – as temporary institutional arrangements – were used to promote and facilitate linkage building between TNCs and local SMEs.
- A number of *Industrial Development ones* (IDZs) were created by DTI in the early 1990s, with the aim of generating a world-class manufacturing environment in close proximity to major ports or airports, where firms could process imported raw materials and intermediate goods, duty free, for export. To date, progress has been made on the construction of four IDZs, namely East London, Richards Bay, Johannesburg International Airport and the new port of Coega, near Port Elizabeth. Although none of them are yet fully operational, they are all meant to encourage linkages between IDZ-based firms and potential suppliers located outside the area.

5. Business linkages case studies

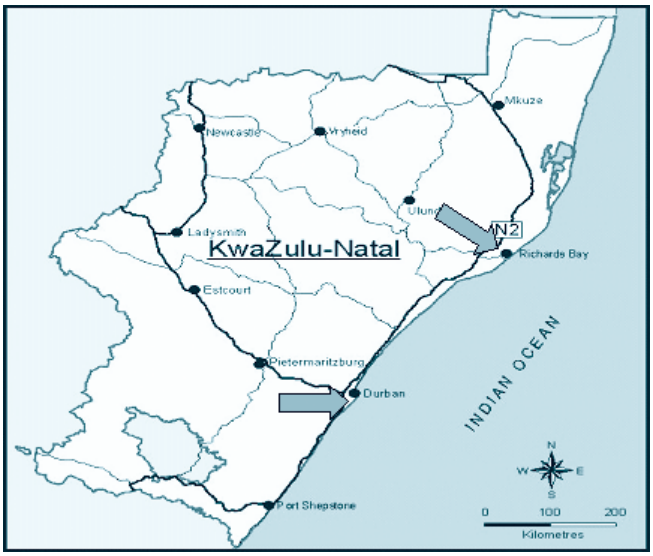
This section describes two success stories in the KwaZulu-Natal Province. They provide some "good practice" insights, but also some lessons to be learned from results which fell below expectations. The first case study refers to the Durban Auto Cluster, and the second to the Richards Bay area. In both case studies, enhancing TNC-SME linkages did not represent a primary objective, but it became a relevant component of measures aimed at supporting small, local businesses. It is also worth noting that in both cases the prime drivers for action were not national agents, but processes that had their roots in local or regional endeavours. National policy and programmes did undoubtedly impact the two cases, but they often had an indirect rather than a direct role in influencing the form and content of activities that were taking place at a decentralized level.

5.1. The Durban auto cluster

Although the Durban region has played host to auto-related manufacturing businesses for the past 40-50 years, the continued presence of this sector could not be taken for granted in a climate of rapidly escalating liberalization. The Durban Auto Cluster (or DAC, as it is commonly known) – a collaborative inter-firm network – was borne out of a process sponsored by the national, provincial (KwaZulu-Natal) and local Government (the erstwhile Durban Metropolitan Council – now the eThekwini Municipality) during the late 1990s in response to the increasing pressures of globalization. (Figure 2).

- The DAC grew in a context of considerable policy adjustment in South Africa following trade liberalization after 1994. This saw a dramatic reduction in tariff barriers, including high import tariffs on both vehicles and automotive components. As explained by Lorentzen *et al*. (1994):

Figure 2. Map of Kwa ulu-Natal Province highlighting location of Durban and Richards Bay

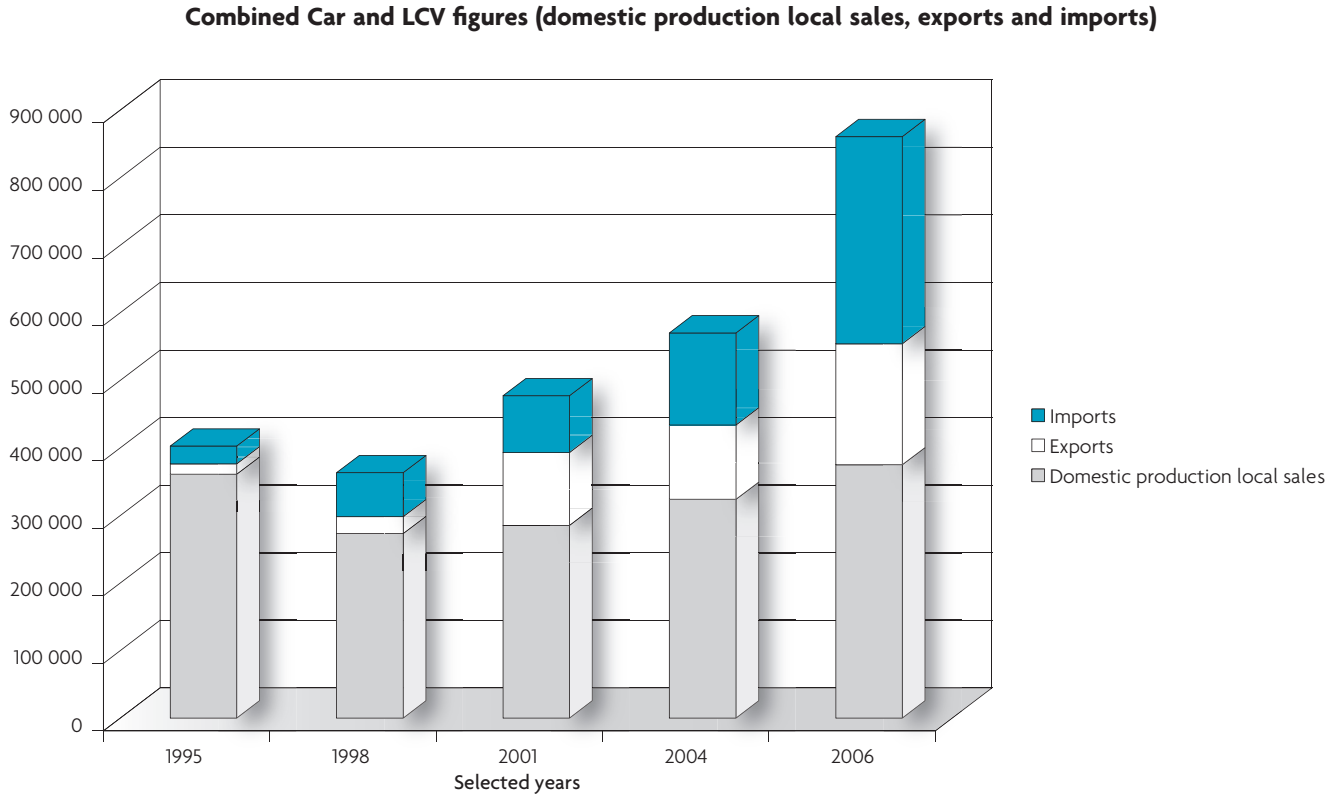


"Duty levels on completely built up vehicles (CBUs) fell from 115 per cent in 1995 to 40 per cent in 2002 and are scheduled to reach 25 per cent by 2012. Tariffs on completely knocked down (CKD) components are lower still" (Lorentzen et al., 2004).

Despite the commitment to trade liberalization, DTI tried to avoid the potential pitfalls of de-industrialization from rapid tariff adjustments and therefore introduced a programme known as the Motor Industry Development Programme (MIDP), with the participation of all key industry players. The MIDP secured new and very substantial FDI inflows, in particular German original equipment manufacturers (OEMs) that were repositioning their production operations of BMWs, Volkswagens and Daimlers (later Daimler-Chrysler). More recently, U.S. and Japanese-based OEMs followed suit. Lorentzen et al. (2004) outline some measurable outcomes of this initiative:

> *"The MIDP, together with the depreciation of the Rand from the mid-1990s, turned South Africa into a relatively competitive producer of both components and completed vehicles. The contribution of the auto sector to total manufacturing sales grew from 9.7 per cent in 1994 to 12.8 per cent in 2003." (Lorentzen et al, 2004:8).*

Figure 3. Domestic OEM sales, exports and imports by volume, 1995-2005



Source: NAAMSA (2006).

Figure 3 illustrates the exports and output growth as the MIDP began to take root in South Africa.

Despite remarkable export growth for vehicles, for local components firms, the picture was not entirely positive. A depressed domestic market in the period prior to 2003, combined with often weak relationships between the headquarters of OEMs and their South African partners, put them under tremendous competitive pressure. Additionally, the integration of OEMs in global supply chains meant that many local producers operating under licence were crowded out by global sourcing operations. At the same time, the devaluation of the rand and the need for OEMs to have their suppliers located close to their export manufacturing operations started to open up new opportunities.

In some instances, as in the case of the component producer Federal Mogul, this entailed a large global component player entering the domestic production scene through acquisitions. In other cases, such as the situation facing Cataler, Toyota's catalytic convert manufacturing subsidiary, the OEM encouraged new investments to meet local content requirements.

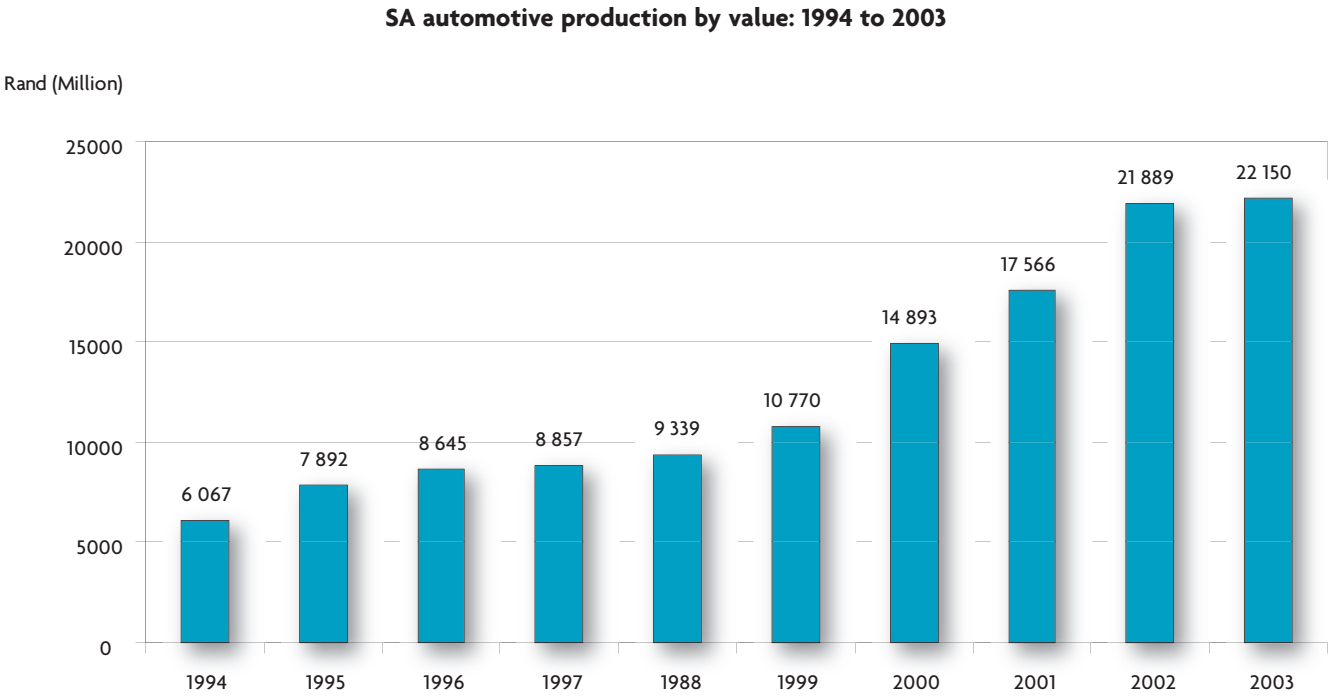
In order to facilitate the establishment of partnerships between OEMs and local component producers, the DTI made a number of attempts to create a series of SME clusters at the national level. However, such attempts were not successful, as they were considered too generic and detached from local realities. The DTI subsequently decided to make resources available to spatial development initiatives in the automotive sector, and selected two main areas: the Eastern Cape, in the Gauteng Province, and KwaZulu-Natal.

The majority of components firm in KwaZulu-Natal were SMEs, and many of them were supplying the Durban-based Toyota plant. In 1997, Toyota South Africa was brought back into the fold of Toyota Manufacturing Corporation's global operations. This required the OEM and its suppliers to rapidly adjust to global standards. A considerable amount of pressure was placed on second and third-tier suppliers to improve their performance or face closure.

Supported by a combination of donor grants and the Provincial Government, an industrial restructuring project was initiated by the then University of Natal in Durban (now the University of KwaZulu-Natal). These included a series of pilot competitiveness benchmarking exercises, including a number of local automotive component producers that had been active in the region for a considerable time.

To begin with, in 1988 the KZN Benchmarking Club was formed as a firm-driven cooperative venture, partially supported by DTI grants, to allow firms to evaluate their relative performance, both in terms of meeting customer demands and improving their competitiveness against direct competitors. Immediately after this, the former university-based facilitators created a special-purpose company, called B&M Analysts (www.bmanalysts.com), to facilitate activities for the Club and perform independent (domestic and international) benchmarks. In 1999, the KZN Benchmarking Club was approached by the Economic Development Unit of the then Durban Metropolitan Council, (now the

Figure 4. Automotive component output by value, 1994-2003



Source: Barnes and Johnson (2004: 8).

eThekwini Municipality) and was advised to broaden its membership and extend the nature of its activities beyond benchmarking-related processes. This marked the start of a considerable expansion of the Benchmarking Club's original scope and led to the involvement of a larger group of automotive-related firms in its activities.

The close cooperative working relationship between university researchers and local firms ultimately led to the decision to formally establish the Durban Auto Cluster (DAC) in 2000, with a membership of 30 automotive firms. Initial funding was secured from the Durban local Government; additional funds were provided by the DTI and the KZN provincial Government. The DAC was to be driven by a firm-base d governance structure that would be open to all automotive firms. Early members included Toyota, a few smaller OEMs, and a range of first, second and third-tier local firms, which were encouraged to join regardless of their ownership structure. The objective of creating TNC-SME linkages has therefore been intrinsic to the work of the DAC since the beginning.

The initial business plan of the DAC was based on four working groups:

- The KZN Benchmarking Club would continue to operate as a working group and focus on benchmarking activities;
- A working group on logistics would seek to develop a common approach to reduce costs and bottlenecks;
- A working group on human resources would deal with issues, such as improving literacy and numeracy, as well as reducing the incidence of HIV and AIDS in the workplace; and
- A final workgroup would tackle matters of supplier development by working towards the adoption of common purchase and accreditation frameworks.

Participants in the DAC could choose their levels of involvement. Some firms chose to participate purely in information sharing activities. However, if firms wanted to access programmes such as training sessions or collective logistics negotiations they would have to upgrade their membership. Membership grew beyond the initial group of 30 firms within a relatively short period of time, and the majority of members were committed to higher levels of participation. Research carried out by Lorenzen *et al.* (2004) on the DAC shows that the principal motivation of many participating firms was to gain access to useful information and resources, as well as to benefit from informal interaction and networks.

The Supplier Development Working Group had the most significant impact on improving the relationships between TNCs (both inside and outside the DAC) and SMEs, which represented the majority of the DAC members. In an industry with relatively high entry barriers and increasingly sophisticated accreditation and technology management systems, the activities of the working group enabled smaller firms to familiarize themselves with first-tier suppliers and OEM requirements, and to share knowledge on how best to meet such requirements. A Toyota official participating in one of the DAC meetings indicated that Toyota's confidence in the region had been greatly reinforced by the impact of DAC's activities.

In 2002 the DAC managed to secure a greater proportion of its funding from its own membership, and a decision was taken by the Durban local Government and KZN provincial authorities to redirect public sector funds to supporting emerging, largely black-owned SMEs on the

periphery of the automotive sector. A number of firms with the potential of becoming OEM-accredited suppliers were identified, and the DAC committed itself to support their upgrading process with a variety of support activities, in collaboration with the KZN Manufacturing Advisory Centre. A number of black-owned SMEs became accredited OEM suppliers and large component producers as a result of this initiative.

It is likely that the next five years will be very significant for the firms participating in the DAC, since the Toyota plant has planned to double its output to reach world-scale operational levels (i.e. 250,000 vehicles per year), and to significantly raise the amount of local content. The MIDP, however, will be either scrapped or restructured by 2012, and local SMEs will have to count on their own forces to meet increasing pressure by TNCs to meet quality standards and delivery requirements.

Overall, a 2004 survey done by Lorentzen *et al.* revealed that the performance of South African component firms involved in these processes had visibly improved over time as a result of the Benchmarking club and the DAC (see Table 4).

The impact of the DAC was also positive in terms of employment generation, compared to other regions. Figure 5 shows that employment levels rose among the enterprises participating in the DAC between 2000 and 2003.

Replicating the experience of the DAC has already been possible, at least to some extent. The same team that worked to establish the DAC has supported similar processes in other regions and other sectors. While the focus has changed from place to place, the model of a business driven process supported by government has remained the key element. However, the creation of TNC-SME linkages has not necessarily been as prominent as in the case of DAC. Although the KZN Textile and Clothing Cluster and an emerging furniture cluster have identified the relationship between domestic producers and international buyers as a highly relevant issue, and have given priority to the development of linkages between domestic garment SMEs, TNC sourcing agencies and TNC retailers.

5.2. TNCs support to SMEs in Richards Bay

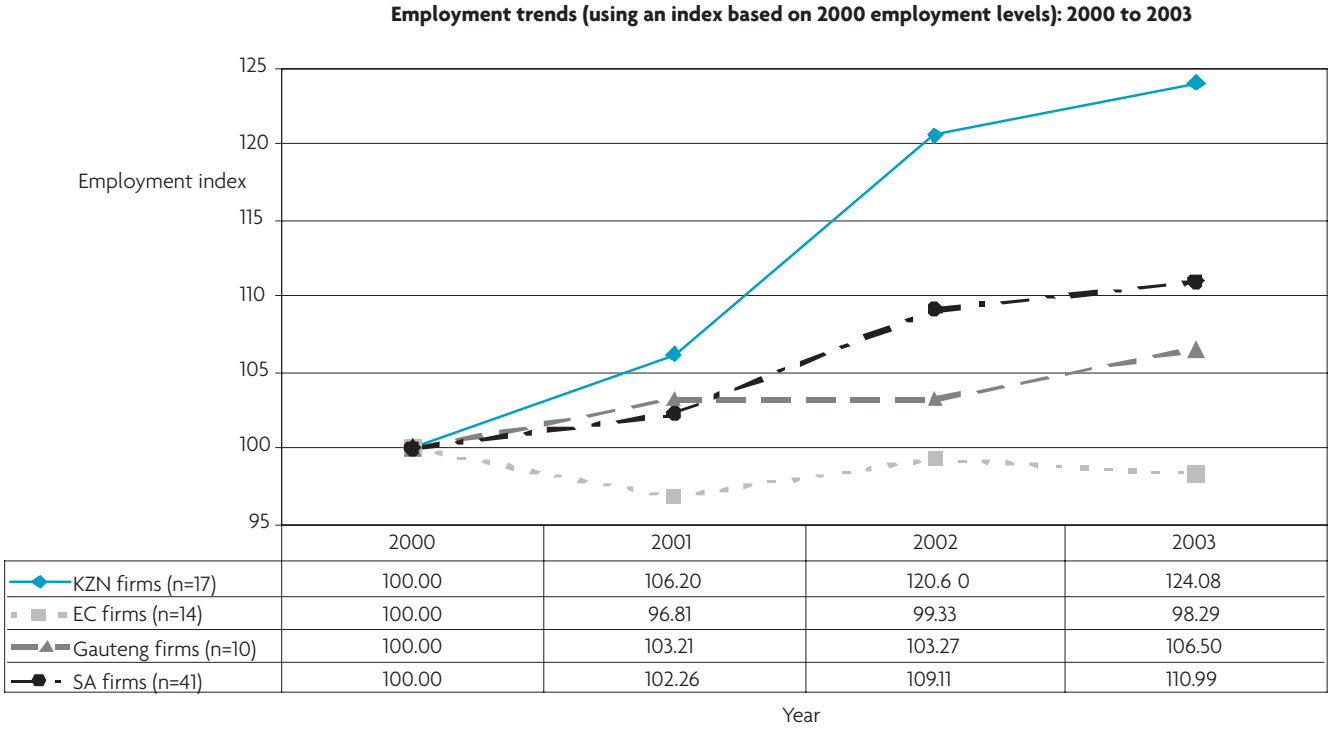
Richards Bay is an industrial harbour town in KwaZulu-Natal, approximately 200 kilometres north of Durban. It hosts the country's high-volume bulk cargo export port (the Port of Durban on the other hand handles the bulk of the country's high-value containerized maritime cargo). The port was constructed primarily as an export outlet for the country's very significant coal exports, which are railed to the port though a dedicated line from the hinterland coalfields. During the early 1970s, the Government used a combination of tax incentives, soft loans and equity, as well as discounted electricity prices, to encourage the relocation of a number of primary processing plants with very significant capital investments. For many years, however, very little downstream investments and activities were generated by such new plants and little trace could be seen of the expected benefits in terms of increased foreign exchange earnings from exports or wider forms of benefits for the local communities beyond employment.

Table 4. Learning and comparative advantage in the auto components sector

CSF	KPI	South African firms						Comparator firms	
		N	1998	1999	2000	2001	Improvement (in per cent) 1998 1999-2001	W. Europe N=14	Emerging economy N=12
Cost control	Total inventory (days)	32	62.6	54.3	47.6	42.0	32.8	31.2	38.6
	Raw material (days)	32	32.3	27.9	25.2	21.8	32.7	17.2	19.2
	Work in progress (days)	32	12.4	8.9	8.1	8.2	34.3	5.3	8.6
	Finished goods (days)	32	17.8	17.5	14.3	12.1	32.0	8.6	9.5
Quality	Customer return rate (PPM)	23	3270	2638	1406	1240	62.0	549	624
	Internal reject rate (%)	25		4.9	4.2	3.9	20.7	1.9	3.5
	Supplier return rate (PPM)	21		21989	14637	18518	16.0	8319	13213
Flexibility	Lead time (days)	17		19.9	19.1	17.9	9.9	16.8	12.0
	Supplier on time & in full delivery (in per cent)	23		78.7	82.1	82.2	4.5	92.2	92.3
	On time & in full delivery to customers (in per cent)	25		92.2	92.8	92.7	0.6	96.1	93.5
Capacity to change	Training spend as a percentage of total remuneration	30		1.3	1.7	2.0	56.2	1.3	3.1
	Absenteeism (in per cent)	27	4.4	4.3	4.1	4.0	9.4	4.2	5.7
Innovation capacity	R&D expenditure (in per cent)	24	1.64	1.70	1.67	2.12	29.5	1.83	2.90

Source: Reproduced from Barnes J, Kaplinksy R and Morris (2003: 11) and KwaZulu-Natal/Eastern Cape and Gauteng Benchmarking Club database.

Figure 5. Employment trends among DAC members



	2000	2001	2002	2003
KZN firms (n=17)	100.00	106.20	120.6 0	124.08
EC firms (n=14)	100.00	96.81	99.33	98.29
Gauteng firms (n=10)	100.00	103.21	103.27	106.50
SA firms (n=41)	100.00	102.26	109.11	110.99

Source: Barnes and Johnson (2004: 20).

The 1990s heralded a change. Two major new capital investments in Richards Bay, in the form of Richards Bay Minerals, and the construction of an additional cutting edge aluminium smelter provided some fresh impetus to the creation of linkages between local SMEs and their TNC partners. As government support was secured in both projects, some pressure could be exerted to encourage outsourcing and subcontracting to local businesses. Additionally, the largest investors made some corporate social responsibility funds available to bring together a team of business development specialists to work with the TNCs and the local SMEs, under the banner of the new Local Business Support Centre backed by Ntsika.

Evidence shows that mixed results were achieved during this period, but considerable learning took place for subsequent activities. According to interviews conducted with relevant stakeholders, the creation of linkages was hampered by the following factors:

- The relatively weak position of local SMEs in terms of skills and access to capital;
- The lack of accreditation of local suppliers and the insufficient quality standards of their products and processes;
- The inaccessibility of, and changes to, ownership structures and management of the TNCs; and
- The lack of experience of TNCs in working with smaller companies and related dynamics (ranging from sensitivity to payment periods to the need for greater levels of communication, supervision and support).

In the late 1990s the DTI decided to launch one of its Spatial Development Initiatives in Richards Bay; the initiative was aimed at securing a series of downstream investments more conducive to the creation of linkages than existing plants. Together with the Port Authority, it decided to assign the land adjacent to the port to the creation of an Industrial Development Zone (IDZ). The IDZ had to offer a quality environment at competitive costs to companies seeking to use local products and duty free imports for export production. The IDZ was also meant to collaborate with an adjacent supplier park for SMEs that did not meet the requirements to locate within the IDZ. In order to achieve these goals, funds from the DTI were used to undertake a detailed business plan and a series of studies on how to better exploit potential business opportunities, as well as to cover some personnel costs for managing the IDZ.

However, by the end of 2007 the IDZ had still not been realized and no progress had been made in registering it. Even though the DTI, together with the SDI team, has been successful in encouraging existing investors to make new investment commitments, only a few business linkages have been created, mainly in marginal areas of activity, such as cleaning services, equipment maintenance or spare components suppliers. Medium-sized firms had not sprung up in the area, and large TNCs in Durban and the East Rand (i.e. the industrial areas to the east of Johannesburg and Benoni/Boksburg) still represent the most convenient input suppliers.

Furthermore, the fact that one of the largest domestic users of aluminium ingots (Hulett Aluminium, a supplier of intermediate and finished aluminium goods) is located in Pietermaritzburg, only 300 kilometres away, has not made

a strong case as to why downstream producers should relocate in the shadow of the smelter. This is somehow aggravated by the fact that primary processing industries such as steel, chemicals and aluminium charge domestic buyers import-parity prices for goods supplied from South African operations. The result is that local buyers have to pay prices (very similar to full import costs) for the supply of aluminium, even if they are located a stone throw away from a very low-cost producer.[56]

In this context, the Zululand Chamber of Business (ZCB)[57] has started to work with TNCs to develop linkages with smaller suppliers, and to leverage some of the technical and business expertise of the TNCs for the benefit of local firms. TNCs have responded positively and used their CSR programmes to back up some of the ZCB's activities. Some examples of such CSR partnerships include: the Hillside 3 project, a mentorship programme funded by BHP Billiton to support local SMEs involved in the expansion programme of the Hillside smelter; the Business Community Park, donated by BHP Billiton to offer business support services and growing emerging businesses; and the Media and Resources Centre donated and funded by FOSKOR. The ZCB also developed an accreditation programme in relation to some of the larger public and private sector procurers. For a fee, firms can be assessed by the Chamber and this accreditation has increased the confidence of potential partners. As of June 2005, the ZCB had 359 paying members, 174 of whom were accredited members.

Additionally, a series of short-term projects have also been carried out in Richards Bay to foster the creation of business linkages, including:

- SEDA, the SME Development Agency created from the merging of Ntsika and Khula, funded the Private Sector Procurement Project. This six-month project aimed to provide a select group of 15 local SMEs with dedicated support to respond to local private sector tenders. Due to a combination of lack of timing and corporate commitment, the project yielded few results. The DTI, however, is considering extending this pilot initiative and is analysing options to improve its impact.
- The National Development Agency, a government-funded national development entity, funded a project known as the Business Referral Advice and Information Network (BRAIN) in order to increase the availability of business development services as well as extension services to rural districts around Richards Bay.
- The DTI funded the Business-to-Business Showcase, an annual exhibition where SMEs could exhibit their wares and capabilities. Procurement officers from TNCs were invited to attend workshops to present their tendering systems, as well as to illustrate their requirements for awarding contracts to SMEs.

Interviews with local stakeholders revealed that there had been several success stories, but that considerable work was still needed to improve the scale and effectiveness of business linkage activities in Richards Bay. In the past, TNCs have not been consistent in providing information to relevant intermediary organizations. They have tended to conduct their operations based on their own databases of potential suppliers, and continued to source large volumes of inputs from a single customer. In some instances, the issue of proprietary technology has raised barriers to the creation of linkages, although TNCs have provided local suppliers with opportunities to participate in less complex production activities. Furthermore, the mostly outsourced services were either the most basic and least skill intensive, or were more specialized in nature, e.g. calibration testing and verification of electronic processing equipment. Many of the intermediate level services were retained in-house, given the lack of certified and competitive local suppliers.

In an attempt to deal with these constraints, the KZN Provincial Government has recently launched the Gijima project, with support from the European Union.[58] The Gijima project, managed by the Department of Economic Development and Finance, has two main objectives: improving the local business environment and stimulating public-private partnerships. The successful implementation of this project will hopefully better link local TNCs and SMEs in the future. A heritage of past relationships means that the business community in Richards Bay can count on the commitment of several TNCs to support the local business environment and to use their CSR programmes to enhance the capabilities of local SMEs. Additionally, government programmes, such as the Black Economic Empowerment Charters, are likely to encourage the deepening of existing business relationships between TNCs and SMEs.

6. Lessons learned and policy recommendations

The results of South Africa's experience in generating and sustaining TNC-SME linkages in the past decade have been rather mixed. After the first democratic elections in 1994, considerable attention was devoted to the objective of building appropriate institutions with relatively clear and distinct responsibilities (e.g. an SME desk focusing on small business issues in a relatively narrow sense). It should be noted that many of the policy instruments available under Apartheid were inspired by a far more interventionist approach and a WTO-incompatible import-substitution strategy. However, since 1994 the creation of TNC-SME linkages has been regarded more as a by-product of other programmes, such as the Black Economic Empowerment Charters or the regional cluster development initiatives, than a policy objective per se.

The key lessons derived from the South African experience in cultivating TNC-SME linkages include the following:

[56] The DTI has launched a major investigation into the practice of import-parity pricing and has suggested that it is an anti-competitive behaviour. It is expected that the findings of the investigation will be made public in the near future.

[57] The ZCB was established in 1926, but has gone through a number of processes to reinvent itself, particularly since the mid-1990s as greater efforts were made to reach out to black-owned businesses. Today the ZCB has a primary role in fostering and facilitating the growth of businesses in the Richards Bay area.

[58] Gijima means "to run" in Zulu – the majority indigenous language of KwaZulu-Natal.

Integrating TNC-SME linkages in the national policy framework

- By focusing on the issue of linkages building in public pronouncements and policy statements, the South African Government made sure that both the DTI and all other actors involved in the field of FDI attraction, trade promotion and SME development would indirectly emphasize TNC-SME linkages as a priority. However, the contrary could be argued, namely that SME-TNC linkage development could have received increased attention if it had been identified as an explicit policy goal rather than a secondary aspect of other activities.

Defining targets clearly

- South Africa has been through a decade of considerable and rapid change. Whilst there has been macro-economic stability, the Government has introduced a new set of policy measures ranging from new labour laws to skills levies and equity programmes to improve the business environment. In a few cases, this has led to some tensions, with the business community requesting amendments to counteract the perception that South Africa had an inflexible labour market, or that it was withdrawing a significant amount of investment from the stock market over rumours of changes in mineral rights policies. In general, however, the government has moved rapidly to clarify expectations, to define targets clearly, and to specify the expected outcomes of announced reforms.

Adopting a strategic and decentralized approach to industrial development

- South Africa has adopted a clear strategic approach to industrial development. The most successful sector-specific policy has been the Motor Industry Development Programme that helped to establish competitive and relatively integrated clusters of automobile companies. However, for local economic development processes such as the Durban Auto Cluster to be successful, it is important that support programmes are initiated and driven at the local level. National policy and programmes are fundamental to support, both directly and indirectly, the form and content of activities that are taking place at a decentralized level.

Dealing explicitly with the legacy of Apartheid

- The South African Government has explicitly encouraged firms to change their ownership, management and employee structures following the Black Economic Empowerment objectives. A series of industry-specific charters have been prepared to clarify the Government's expectations and new requirements for companies. The formalization of the charters was essential to overcome confusion and uncertainty, secure transparency and obtain effective responses by the business community, including the creation of linkages with black-owned local SMEs.

Pursuing institutional alignment, information sharing and cooperation

- In a context where policy objectives are pursued at the local, regional and national levels, the capability to share information and of actively cooperating among different institutional levels is essential. Part of the rationale of the DTI`s decision to bring TISA back within its own structure was driven by the need to increase national coordination on FDI, trade, industrial and SME development programmes. Leaders of 17 South African Government institutions working in the trade and industry field formed the Council of Trade and Industry Institutions (COTII) with the aim of sharing information, building consensus, promoting joint activities and improving coordination.

Promoting public-private sector dialogue

- In South Africa, the Government has instituted a Presidential Investment Council composed of key global business leaders, with the purpose of advising the President on how to improve the investment environment of the country. Such a high-level dialogue was instrumental in creating a common understanding between the Government and the private sector on how to increase the impact of FDI and how mutually beneficial TNC-SME linkages could be created.

Raising SME awareness of global value chains

- Being aware of the structure and governance of global value chains can be important. For example, in order to fulfil the certifying requirements of first-tier suppliers and OEMs, local SMEs were able to cooperate through the DAC to avoid multiple certification processes, as well as excessive costs. For local firms, tackling problems related to accessing value chains and linkage issues in a collective manner is the most effective way to minimize costs and achieve collective efficiency.

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Chapter VII

STRATEGIES AND POLICIES FOR PROMOTING TNC-SME LINKAGES IN UGANDA[59]

1. Introduction

The Ugandan economy, one of the most rapidly growing in Africa, is just emerging from decades of decline and lack of investment. Until the mid-1980s, the country was struggling to end a period of political and economic chaos that had destroyed its reputation as the "pearl" of Africa. Traditionally, the Ugandan economy has been largely based on agricultural commodities with fluctuating international values. Its sustained growth since 1986 is the result of concerted efforts of the Government and the international community to reduce the dependence of the country on imported manufactured goods by improving the business environment, attracting foreign investors and strengthening their local embeddedness through linkages with domestic firms.

This study illustrates Uganda's experiences in fostering TNC-SME linkages. It first provides an overview of the economic progress of the country and the patterns of growth of its foreign direct investment (FDI) inflows. It then outlines the policies and measures that have been adopted since the 1990s to improve the business environment and investment climate, in particular those targeted at attracting foreign investment and supporting domestic enterprise development. Finally, it looks at specific public and private measures and programmes for promoting TNC-SME linkages, and concludes by drawing lessons from selected case studies and identifying a series of key success factors in the creation of TNC-SME linkages.

2. Economic backdrop

Over the past 10 years, Uganda has experienced stable, single digit inflation rates and an average annual economic growth of over 6 per cent per annum. However, Uganda is still one of the poorest countries in the world with a GDP per capita equal to $334 per year in 2005. In addition, its dependency ratio, 1.12, is the highest in the world (World Bank, Uganda, Moving Beyond Recovery: Investment & Behavior Change For Growth).

The Government has made economic development a priority and is focusing on the private sector, attracting FDI, improving access to world markets and on achieving relief from excessive debt. Consequently, it has outlined a number of policy initiatives to jumpstart the economy, including the Plan for the Modernization of Agriculture, the Medium Term Competitiveness Strategy for the Private Sector, the Competitiveness and Investment Climate Strategy, the Poverty Eradication Action Plan, and the Big Push by the Uganda Investment Authority (UIA), among others.

As Table 1 indicates, the Ugandan economy is heavily dependent on agriculture, which accounts for approximately 32 per cent of its GDP and employs approximately 77 per cent of the working population. Approximately 71 per cent of the working population is engaged in subsistence agriculture as a main occupation. Agricultural products account for nearly all export earnings. Uganda's main exports include coffee, cotton, tea, tobacco, flowers and fish. The industry sector accounts for approximately 21 per cent of GDP and most manufacturing involves processing food, drinks and tobacco.

Although the economy is highly dependent on agriculture, other sectors of the economy have experienced large growth rates, as shown in table 2. The industry sector has registered an average growth rate of 6.6 per cent over the past three years and the services sector an average growth rate of 7.8 per cent.

In addition to having conditions favourable for agricultural production, Uganda also has significant, unexploited mineral resources, such as gold, zinc, wolfram, petroleum, diamonds, vermiculite and silica.

Although Uganda's natural resource base offers significant opportunities for FDI in agriculture and manufacturing, Uganda's poor infrastructure has often been cited as impediment to foreign investment. The recent political unrest in Kenya and the associated shortages, increased prices and decline in productivity have highlighted Uganda's over-reliance on Kenya as a transit route. However, they have also prompted Uganda to implement measures to improve its infrastructure and diversify its international transit routes.

[59] This chapter is based on a report prepared for UNCTAD by Fred ZAKE Director, InterAfrica Corporate Limited, Uganda.

Table 1. Sector contribution to GDP (%)

Sector	2003	2004	2005	2006
Agriculture, hunting, forestry, fishing	33.3	31.4	32.0	32.2
Industry	20.8	21.9	21.5	21.4
Mining, manufacturing, utilities	10.8	11.4	11.0	11.1
Manufacturing	8.8	9.3	9.0	9.0
Construction	10.0	10.5	10.5	10.3
Services	45.9	46.7	46.5	46.4
Wholesale, retail trade, restaurants and hotels	14.2	14.2	14.8	14.4
Transport, storage and communications	6.8	7.8	8.6	7.7
Other activities	24.9	24.7	23.1	24.2

Source: UNCTAD.

Table 2. Sector growth rates (%)

	2003	2004	2005	2006
Agriculture	2.27	5.23	5.11	4.99
Industry	7.21	5.55	10.13	3.37
Manufacturing	4.04	4.01	11.07	-1.56
Services	6.34	6.34	8.98	9.71

Source: World Bank, Africa Development Indicators.

3. Recent FDI trends

As shown in table 3, whereas in the 1990s, FDI inflows were at a low level, averaging to $82 million over the decade, there has been a steady increase from 2001 to 2006. FDI inflows in 2006 totalled $307 million, more than triple the average during 1990-2000. The increase is primarily a result of Uganda's privatization programme, which included privatizing the railway and electricity sectors and opening the telecommunications sector to private participation (the mobile-phone network is one of the fastest growing in Africa), Uganda's liberal policies in the manufacturing sector and Uganda's focused efforts on reforming its investment environment over the period 2000-2006. In fact, Uganda's FDI performance, a measure which ranks countries by the FDI they receive relative to their economic size, was listed as 70 in 2005, which is well above its FDI potential, ranked 117 out of 141 countries. The FDI potential index captures several economic and structural factors that affect an economy's attractiveness to foreign investors.[60] For comparison, Kenya has an FDI performance of 134 in contrast to an FDI potential of 124 (under performer), the United Republic of Tanzania has an FDI performance of 65 in contrast to an FDI potential of 121(above potential) and South Africa has an FDI performance of 105, in contrast to an FDI potential of 73 (under performer) (UNCTAD, World Investment Report, 2007).

Table 3. FDI Inflows *($ million)*

	1990-2000 (annual average)	2001	2002	2003	2004	2005	2006
Uganda	82	151	185	202	222	257	307
Kenya	29	5	28	82	46	21	51
Tanzania, Utd. Rep. of	129	389	388	308	331	448	377
South Africa	854	6,789	757	734	799	6,251	-323
East Africa	459	1,042	1,020	1,310	1,318	1,205	1,789

Source: UNCTAD, *World Investment Report 200*.

[60] Further information on how the inward FDI performance and inward FDI potential indices were constructed can be found in the World Investment Report 2007.

Table 4 shows the importance of the FDI share in GDP, a figure that has remained relatively stable, with flows totalling almost three percent of GDP during the period 2003-2005. FDI stock as a percentage of GDP has steadily increased, to approximately 25 per cent of GDP for 2006. In terms of both FDI flows and stock as a percentage of GDP, Uganda has been more attractive for foreign investment than Kenya, but lags behind the United Republic of Tanzania.

Table 5 shows the share of FDI inflows as a percentage of gross fixed capital formation and per capita. The share of FDI flows as a percentage of gross fixed capital formation in Uganda has increased from 12.2 per cent in 2004 to 14.3 per cent in 2006, and is higher than that of Kenya and the United Republic of Tanzania. FDI flows per capita have similarly steadily increased in Uganda, in contrast to both Kenya and the United Republic of Tanzania, where the amount of FDI flows per capita has declined over the period 2003-2005.

In light of Uganda's relatively small economy, Uganda's FDI inflows tend to be dominated by a large number of small-scale investments rather than by a few large-scale foreign investments. However, some recent FDI investments include larger projects, such as: the purchase of UCB by Stanbic, the arrival of Eskom and Globeleq as holders of the UEGCL and UEDCL concession, the arrival of Sheltam as the holder of the Uganda and Kenya railways concession, the purchase and refurbishment of the former Nile Hotel by the Serena Group, MTN's investment in mobile telecommunications, Crystal Clear Software's investment in micro-finance software and Fiduga Limited's investment in floriculture (UNCTAD, Report on the Implementation of the Investment Policy Review).

Investors in Continental Europe, the United Kingdom, the United States and South Africa are the major sources of FDI in Uganda. The recent increase in FDI in 2006 was partly a result of investments from Australia in the oil sector and from Egypt, India, Kenya, the United States and South Africa in services and agro-processing (UNCTAD, World Investment Report 2007). In fact, interest in investing in Uganda is particularly strong in South Africa. FDI in Uganda from

Table 4. FDI as a percentage of GDP

	FDI Flows as % of GDP			Inward FDI Stock as a % of GDP		
	2003	2004	2005	2000	2005	2006
Uganda	2.97	2.96	2.81	14.1	22.0	25.0
Kenya	0.41	0.67	0.70	7.3	5.8	5.0
Tanzania, Utd. Rep. of	4.36	4.21	3.93	29.8	39.7	47.8
South Africa	0.09	-0.47	0.95	32.7	32.4	30.2

Source: UNCTAD, World Investment Report 2007 and the World Bank Group, Africa Development Indicators.

Table 5. FDI flows as a percentage of gross fixed capital formation and per capita

	FDI Inflows as % of Gross Fixed Capital Formation			FDI Flows per Capita		
	2004	2005	2006	2003	2004	2005
Uganda	12.2	12.7	14.3	7.53	7.99	8.92
Kenya	1.8	0.6	1.3	2.50	1.38	0.62
Tanzania, Utd. Rep. of	13.6	15.8	12.6	14.27	12.49	12.35
South Africa	2.3	15.4	-0.7	17.08	15.13	133.45

Source: UNCTAD, World Investment Report 2007 and the World Bank Group, Africa Development Indicators.

South Africa totalled $122.9 million in 2003, a figure that is potentially underestimated as it is possible that, due to strict foreign exchange controls, South African firms may have invested through tax havens, such as Bermuda, Mauritius and the Channel Islands. South African investments in Uganda have grown tremendously from about $51 million (R300 million) to about $86 million (R500 million) from 1999 to 2003, while the value of Uganda's exports to South Africa has increased from R6 million to R18 million. Notable South African firms that have firmly established their presence in Uganda include ESKOM in power distribution, MTN in telecommunications, Shoprite Checkers in wholesale retail, Stanbic Bank in banking, and SABMiller in beverages.

Although table 6 indicates that although Uganda has not yet experienced significant FDI inflows from Asia, unlike its neighbours, Asian FDI has been accelerating, particularly from China. The UIA reports that China is now the seventh largest investor in Uganda. During the past financial year, the UIA licensed 28 new Chinese projects with planned capital investments of $45 million. Recent notable Asian FDI projects include the MFK Corporation, a joint venture between the Chinese automobile manufacturer, Geely International and the Chinese and Ugandan Government and UGIRAN Ltd., a Ugandan and Iranian joint venture producing tractors.

Table 6. FDI stock from selected developing Asian economies *($ million)*

	China FDI stock (2005)	Malaysia FDI stock (2004)	Korea FDI stock (2002)
Kenya	58.3	0.3	2.0
Tanzania, Utd. Rep. of	62.0	3.9	2.1
Uganda	5.0	-	-

Source: UNCTAD, Asian Foreign Direct Investment in Africa.

As table 7 indicates, approximately 30 per cent of foreign investments have been in manufacturing, 18 per cent in wholesale and 16 per cent each in transport and financing. TNCs dominate many sectors of the economy in which they are operating. These firms are either targeting the local market or sourcing local resources, which are both key reasons for FDI. Examples include, British American Tobacco Uganda (BATU) in the agro processing and tobacco industry, Century Bottling Company (Coca-Cola), Nile Breweries Ltd (SABMiller) and Uganda Breweries Ltd. in the beverages sector, Mobile Telecommunications Network (MTN) and Celtel in the telecommunications industry, Tilda Rice in the rice growing and export sector, and Shoprite Checkers in the wholesale and retail trade sector, among others..

A survey conducted by the UIA in 2005 indicates that the most critical factors to enterprises in deciding whether to invest in Uganda are political stability (72 per cent of enterprises) and the domestic economic situation/ market size (65 per cent of enterprises). The 2008 Index of Economic Freedom confirms the favourable view of Uganda's economic policies, ranking Uganda at 52, which is higher than South Africa (57), Kenya (82) and the United Republic of Tanzania (97).

The UIA survey also indicated that Greenfield projects were the preferred mode of entry of FDI, comprising 68 per cent of projects. In addition, the survey also revealed the tendency of investors to seek local joint venture partners to hedge their risks in conducting business in Uganda either by sharing investment risks, obtaining access to information on local business practices and labour regulations to expedite start-up operations or obtaining access to local markets and funding sources.

Local firms surveyed also benefited from networking with foreign TNCs by accessing overseas markets where trade regulations and other restrictions made access difficult or by accessing technology and know-how that were critical to add value, reduce production costs and enhance international competitiveness. Local firms were also interested in accessing financial resources, more secure and reliable markets, and new sources of inputs for production. They also expected to negotiate better or more reliable prices for their goods or services by establishing a joint-venture with an international firm.

Table 7. Investment by sector *($ million)*

	2001		2002		2003		% Change	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	2001 02	2002 03
Agriculture	81.1	7.2	81.1	6.8	81.8	6.4	0.0	0.8
Manufacturing	326.6	28.9	363.3	30.4	377.7	29.5	11.2	4.0
Construction	25.4	2.2	25.3	2.1	33.3	2.6	-0.2	31.6
Wholesale	207.4	18.3	213.8	17.9	208.1	16.3	3.1	-2.7
Transport	194.1	17.2	170.5	14.3	191.5	15.0	-12.2	12.4
Financing	147.2	13.0	197.3	16.5	213.5	16.7	34.1	8.2
Community	1.2	0.1	3.1	0.3	3.3	0.3	168.5	6.2
Other	147.2	13.0	140.7	11.8	170.0	13.3	-4.4	20.9
Totals	1,130.1	100.0	1,195.2	100.0	1,279.3	100.0	5.8	7.0

Source: Uganda Investment Authority, Report on Foreign Private Capital Survey 2004.

4. The policy framework

The Poverty Eradication Action Plan (PEAP) has set out the Government's economic development framework since 1997, when the first PEAP was created. Although the PEAP takes a long term approach in addressing poverty, aiming to reduce the number of individuals living below the poverty line to less than 10 per cent by 2017, as compared to 44 per cent in 1997, it is revised and implemented on a three-year cycle. To date, the PEAP has been revised twice, in 2000 and 2004. The third PEAP, implemented in 2005 was built around five key pillars: (a) economic management, (b) enhancing production, competitiveness and incomes, (c) security, conflict resolution and disaster management, (d) good governance, and (e) human development. The current PEAP expires in June 2008 and will require that the Government embark on a new revision process. In addition, 2007 marked the mid-point for the PEAP's 20-year targets. As a result, the Government commissioned an independent evaluation of the PEAP. The report of the evaluation, published in June 2008, stated that the PEAP has been successful, but noted that "after a period of high prominence, and notwithstanding the changes that have been made to the PEAP over time, in recent years the PEAP has lost salience as the focal point for national strategic management."[61] The report offers several proposals for the next five-year National Development Plan, which will be developed in consultation with various key stakeholders, including political leaders, development partners, the private sector and civil society.

The Competitiveness and Investment Climate Strategy 2006-2010 (CICS) is part of Uganda's Public-Private Partnership (UP3) economic reform strategy for addressing Pillar 2 of the current PEAP, enhancing production, competitiveness and incomes. It focuses on (a) addressing factors affecting the competitiveness of key sectors, (b) proposing means to remove or mitigate factors that currently constrain economic growth and competitiveness, and (c) addressing factors that impede the participation in international and regional markets. The CICS is implemented by the Ministry of Finance with support from various development partners, including the European Union, the Austrian Development Agency, USAID, the United Kingdom's Department for International Development, and the World Bank.

[61] Oxford Policy Management (2008), Independent Evaluation of Uganda's Poverty Eradication Action Plan (PEAP)

4.1. Improving the business and the investment climate

With the enactment of the Investment Code of 1991, which established the Uganda Investment Authority under the Ministry of Finance, the Government fully recognized the importance of private sector and FDI to the economy, in terms of technology transfer, employment creation, and the opening up of external markets. In addition to the Investment Code, the Government has implemented several measures to improve Uganda's investment environment.

Firstly, the Ugandan Government has adopted a tax regime conducive to investment, which includes such measures as: a low corporate tax of 30 per cent, zero or low import duty on raw materials, generous allowable deductions, including investment capital allowances that are deductible from taxable income. In addition, the Government has signed a number of double taxation treaties with key FDI source countries.[62] The Government has recently focused on reforming tax administration, which involved restructuring the URA in 2004. Among other things, the URA created a unit dedicated to handling large taxpayers, which ensures faster processing of VAT refunds, and is more widely utilizing electronic means for payments and refunds.

Secondly, to support private sector development the Government is dedicated to revising the commercial laws under the World Bank Commercial Justice System Reform Programme and the Uganda Law Reform Commission, established in 1990. The Uganda Law Reform Commission initiated a review of all significant commercial laws, in consultation with the private sector when possible, and drafted a number of new bills. Although progress on passing the bills into law has been slow, the bills are currently being fast-tracked and most are expected to be enacted by the end of 2008. The Government has also amended the laws governing patents, trademarks and other intellectual property. In addition, the Government has taken steps to upgrade the skills and resources of judicial officers to allow for better and faster resolution of disputes, has acceded to international conventions and protocols for the protection

[62] Uganda has signed DTTs with Denmark, India, Italy, Mauritius, the Netherlands, Norway, South Africa, the United Kingdom and Zambia.

of investment disputes (e.g., ICSID) and has signed a number of bilateral investment treaties.[63]

Thirdly, the Government has taken key steps to improve the financial sector, strengthen the regulatory framework and foster competition in the banking system. Recent concerns facing the Government have included the high cost of credit and insufficient access to banking services in rural areas. A key initiative to address these areas was the Financial Institutions Act of 2004, which provided a new regulatory framework. In 2005, a number of regulations were issued on ownership and control, limits on credit concentration and large exposures, liquidity, licensing, insider lending limits, credit reference, corporate governance, credit classification and provisioning and capital adequacy requirements. In addition, in 2004 the Government lifted the moratorium on new banks and in 2002 successfully privatized Uganda Commercial Bank to Stanbic Bank, now the largest bank in Uganda. The level of services has also improved with the widespread introduction of e-banking and ATMs, the development of credit and debit cards, improvements in branch and inter-bank connectivity, and the introduction of leasing instruments. As a result of these new regulations, the non-performing loan ratio has decreased from over 40 per cent in 2000 to less than three percent in 2006 and the financial system has become more stable due to capital adequacy requirements, risk management procedures, and regulations reducing the concentration of bank ownership. The Government also established the Uganda Securities Exchange in 1998, which now has nine listings. However, the listed stocks and bonds are still relatively illiquid.

While these measures have stimulated investment, as demonstrated by Uganda's relatively strong recent FDI performance, and contributed to a more stable financial and economic environment, there are still significant factors that may impede the acceleration of future FDI inflows. Critical among those constraints are: (a) limitations in Uganda's physical infrastructure (e.g., transportation and electrical power); and (b) the bureaucratic red tape.

Firstly, Uganda needs to improve its infrastructure, a step that will reduce the cost of doing business and enhance access to markets. Uganda's rail network has been noted as inefficient and unreliable. In its efforts to address these deficiencies, the Government has taken steps to implement sub regional railway networks. For example, Uganda and Kenya signed a joint 25-year concession agreement for freight operations in Uganda and freight and passenger operations in Kenya with Rift Valley Railways[64] in late 2006. Although the agreement was intended to improve rail infrastructure and increase traffic by 75 per cent in the first five years, these outcomes have not materialized. Other new initiatives include a proposed regional rail infrastructure development plan by the East African Community.

Uganda's road network has also been criticized: although Uganda has adequate road coverage, the quality of existing roads is extremely poor, with the share of paved roads totalling only seven percent (World Investment Report, 2007). Congestion in Kampala is also a major concern. The Government has similarly recognized the importance of road improvement. In fact, it is a key element of the PEAP. However, unlike Uganda's railway network, which involved concessioning some operations to the private sector, the Government believes that road traffic volumes are too small to support private investment (e.g., through toll roads). As a result, road improvements have been publicly financed. The Government has earmarked UGX 1.1 trillion, or approximately $666.7 million, in the 2008 budget to repair Uganda's road network.[65] However, the amount spent on infrastructure – approximately 8.4 per cent of per capita income on infrastructure, which corresponds to only $21 per capita – is deemed insufficient given its land-locked status (World Investment Report, 2007).

The Government has implemented various regulatory reforms in the electricity sector, such as the Electricity Act of 1999. In 2001, the Government separated the electricity generation, transmission and distribution operations. Although the Government retains full ownership of assets in the electricity sector, it has introduced private sector participation by concessioning generation and distribution operations. The Electricity Act also established the Electricity Regulatory Authority which has rapidly become a technically competent, independent regulator for the electricity sector. Despite Uganda's modernized framework and the concessioning of generation and distribution operations, Uganda suffers from an acute power crisis, with load-shedding a common occurrence. Recent problems exacerbating the power crisis include droughts and delays in project implementation on new generating capacity, such as the construction of two hydropower projects, Bujagali and Karuma (a public-private partnership with Norpak Power Ltd.), which had been held up as a result of domestic opposition, environmental concerns and a corrupt investigation. As it currently stands, Bujagali, which will deliver 250 MW of power, will only be operational in 2011. In the meantime, the unreliable supply of electricity has been a major impediment to foreign investment and many firms have been forced to invest in costly generators and alternative sources of energy for their operations. To mitigate these effects, the Government implemented a policy of providing tax waivers on diesel for generators of over 100 KVA in 2006 and recently extended the waiver to key sectors using smaller generators, such as banking, flower export and telecommunication.

Secondly, the Government must take measures to reduce the bureaucracy in the public sector and enhance the perceptions of the public sector towards the private sector. The World Bank's *2007 Doing Business Report* ranked Uganda 118 out of 178 countries on an 'ease of doing business' index. Although Uganda is rated higher than the United Republic of Tanzania (130), the ease of doing business is considerably harder in Uganda than in Kenya (72) and South Africa (35). As it stands now, starting up a new company requires

[63] Uganda has signed BITs with Belgium and Luxembourg, China, Cuba, Denmark, Egypt, Eritrea, France, Germany, Italy, the Netherlands, Nigeria, South Africa, Switzerland, the United Kingdom and Zimbabwe.

[64] Rift Valley Railways is consortium of five companies led by Sheltam, with financial backing of the International Finance Corporation.

[65] Yoweri Kaguta Museveni, Presidents Speech at the 9th Summit of East African Heads of State. Kigali, Rwanda, 26 June, 2008

18 procedures and takes 28 days. In addition, the President admitted in a recent speech that: *"Our public service is very bureaucratic and hierarchical, for example, we have a permanent secretary, an under secretary and several other secretaries below who do not regard the private sector as an ally. ( ) The civil service does not appear to understand that the private sector is the key to growth and development and as a result was largely hostile ."*[66]

Although the Government has taken steps to improve the investment climate, a recurrent weakness, as reported by UNCTAD, is "the relatively slow pace in moving from conception to realization." (UNCTAD, 2007). As noted, several reforms – such as those of the commercial laws and the Investment Code of 1991, discussed more fully below – have been rigorously debated and planned, but not yet implemented. Similarly, improvements in Uganda's railway network and electricity generation capacity have been planned, yet progress on these projects has been slow. However, as discussed in the following section, the Presidential Investors Round Table, established in September 2004, has been a mechanism for monitoring progress on reforms.

4.2. Attracting FDI strategically

Several successful TNCs such as British American Tobacco Company, Shell Uganda, Total Uganda, Caltex, Nile Breweries Limited (SABMiller), Uganda Breweries (Kenya Breweries and Guinness Brewing), and Mobile Telecommunications Network (MTN) are among the top 10 taxpayers in Uganda. Accordingly, the Government has increased its efforts to attract and support more TNCs in relocating to the country.

A key initiative was the launch of the "Big Push Strategy" of investment promotion in April 2000, under the belief that only a dramatic and sustained set of actions would yield significant results. The "Big Push" strategy of investment promotion included an eight-point action plan: (a) creation of a Cabinet Committee on investment chaired by the President, (b) creation of multi-facility economic zones, (c) targeted promotion of certain sectors, (d) conclusion of bilateral investment treaties (BITs) and double taxation treaties (DTTs) with key FDI source countries, (e) promotion efforts by Ugandan embassies, (f) intensification of investment promotion efforts and refocusing of the UIA, (g) coordination by the UIA and the drafting of client charters, and (h) a vision implementation period. Most of these initiatives have been either partly or fully implemented.

Although the Investment Code of 1991 was a watershed in the field of investment promotion, as it consolidated the law regulating both local and foreign investment and reduced the need for investors to approach different government bodies for facilitation and support, it has been criticized lately for its "relatively restrictive and control-oriented regime" (UNCTAD, 2007). The Investment Policy Review carried out by UNCTAD in 1999 recommended eliminating the mandatory licensing requirements and the requirement to register the terms and conditions of technology agreements (UNCTAD, 1999). Revising the Investment Act is a priority for the Government, but progress has been slow. A bill is currently pending that would liberalize the investment environment. Among other things, it would open all sectors in the economy to FDI, eliminate the licensing requirement in favour of a registration requirement for all investments greater than $50,000, eliminate the registration of technology agreements, and ensure greater consistency with the Constitution, other laws and actual practices. Although this bill has yet to be passed, actual practices are more liberal than the current Investment Code would suggest. For example, licensing is essentially voluntary and, although the Code restricts FDI in farming, all sectors are open to FDI, including commercial agriculture.

The Investment Code also established the Uganda Investment Authority, which operates under the general supervision of the Ministry of Finance, Planning and Economic Development and is charged with the mission to "make a significant and measurable contribution to sustainable development in Uganda by promoting private investment." The UIA provides advice and assistance to foreign investors, processes investment licenses, arranges contacts for potential investors and assists those seeking joint venture partners and funding, and reviews and makes policy recommendations to the Government.

The UIA was restructured after 2000 to ensure that it focuses more on investment promotion, investment facilitation and advocacy and less on administration and regulation. As a consequence, the UIA has been downsized and has adopted a less intrusive approach with investors (e.g., by stopping field visits when granting investment licenses). The Government has also stepped up the promotion efforts by Ugandan embassies, particularly in important FDI source countries: the UIA trains all new ambassadors, holds annual training sessions for diplomats, grants a yearly award to the best promoter and uses embassies to distribute promotional materials.

The Government has adopted a "Team Uganda" approach to investment facilitation, whereby each ministry and public agency work closely with each other to promote and facilitate foreign investment. The UIA plays the role of team leader by spearheading initiatives and being the key contact for investors. An important initiative was the introduction of client charters for each public administration that contains a schedule of services and the costs and time requirements for each service. Although the intention was to mitigate the bureaucratic red tape and corruption faced by investors, the lack of monitoring procedures has limited its effects. The offices of the UIA also house representatives from the URA, the Department of Immigration and Ministry of Lands, a step designed to save investors time and money.

The UIA also serves as the secretariat to the Presidential Investors Round Table (PIRT). The PIRT was established by the Government for a two-year term in 2004 and extended for another two-year term in 2006. The taskforce is chaired by the President and is composed of 22 chief executives from leading companies in Uganda who advise the President on

[66] Uganda Investment Authority Kampala, Report on the 2nd Presidential Investors Roundtable Meeting, "Making Uganda a leading Investment Destination" 31 March 2005.

Box 1. Introducing sound investment policy reforms in Uganda

UNCTAD's Investment Policy Review (IPR) of Uganda, published in 2000, formulated a series of recommendations on how to improve Uganda's investment framework, investment promotion efforts and strategies to attract and benefit from FDI. It spelled out the "Big Push" strategy of investment promotion requiring a dramatic and sustained set of actions.

Under the request f the Ugandan Government, the IPR was followed, in 2005, by UNCTAD's Blue Book on Best Practices in Investment Promotion and Facilitation, financially supported by the Japan Bank for International Cooperation (JBIC). The Blue Book suggested ten measures to be implemented over a period of 12 months, intended to move Uganda towards best practices in investment promotion and facilitation.

According to an assessment carried out by UNCTAD in 2007, policymakers in Uganda should be credited with engaging in a **focused investment policy reform** agenda over the period 2000–2006. Subsequent to the reforms, average annual FDI inflows rose to $204 million in 2001-2005 from $127 million in 1996- 2000. Additionally, the following objectives have been accomplished:

The majority of **legal and regulatory changes** recommended in the IPR have been either partly or fully implemented.

The record in the **utilities, infrastructure and financial services** sectors is strong in terms of regulatory reforms, but mixed in terms of quality and availability of services.

With regard to **investment promotion**, the eight key actions of the "Big Push" strategy recommended in the IPR have all been partly, and sometimes fully, implemented.

However, among the ten measures of the Blue Book, only one has been fully implemented within the expected time frame of one year. Partial progress has been made for many of the others, while no genuine action has been taken in a couple of instances. Overall, the reform implementation is good in general, but constraints and bottlenecks in key areas persist, and the implementation of certain long-planned reforms has been significantly slower than expected.

Source: UNCTAD, Report on the Implementation of the Recommendation of the Investment Policy Review (2007).

measures to stimulate investment and remove bottlenecks. The PIRT consists of five working groups in the areas of (a) the regulatory environment, (b) infrastructure, (c) education, (d) ICT, and (e) agribusiness. The PIRT provides recommendations in these areas and monitors their progress. Accomplishments by the PIRT include progress towards financial closure of two hydropower projects (Bujagali and Karuma), reforms at the URA and the formation of the Ministry of Information Communications Technology.

The UIA is also now responsible for developing and promoting the Kampala Industrial and Business Park (KIBP) in Namanve, with financial support provided by the World Bank, the Luzira Business Park and the Bweyogerere Business Park. The industrial parks will be equipped with high-quality infrastructure and will include export processing zones with tax privileges to promote manufacturing activities for the export market. Although progress on the business parks had been slow, it is now gaining speed. Roads are being opened and a pricing strategy is being prepared for land in the KIBP, after which the UIA will start allocating land to investors. Luzira has 14 projects that are now putting up buildings and a drug company, Quality Chemical Industries, is already in production. Bweyogerere is in an earlier stage of development: land has been allocated to eight projects, but roads have yet to be opened.

The Government has encouraged a more targeted, small-scale approach towards investment promotion. The UIA has recently targeted its efforts on promoting FDI in horticulture, food processing, textiles and packaging. The "Big Push" strategy gave priority support to investors in agriculture, printing and publishing, education, ICT and the financial sector. Investors in these sectors were to be given extra support and facilitation to create "centers of excellence" that can be emulated by other firms in the country. UNCTAD's IPR also suggested potential investment promotion of agriculture, textile and education (Box 1). Uganda has made good progress in education, becoming a regional strength at the secondary and tertiary level. This has improved Uganda's workforce, which is plentiful, English-speaking and well educated, and which will serve to attract further foreign investments.

4.3. Strengthening the absorptive capacity

In Uganda, several actors among government agencies, NGOs and development partners, are actively involved in upgrading the skills of SMEs and their technology. Emphasis

Box 2. Developing successful entrepreneurs in Uganda

Solar Energy Uganda (SEU) is an end-to-end energy service company that sells, installs and services solar energy systems. The company is led by part owner and managing director, Richard Kanyike, who is one of the first graduates of the Empretec Programme administered through Enterprise Uganda.

SEU first approached Enterprise Uganda in 2002. At that time, SEU was already a pretty sizeable business, installing approximately 1,000 solar power units per year. Despite the moderate success, Mr. Kanyike was looking for a way to grow and scale his company beyond the market around Kampala. However, without the proper systems or adequate management skills, Mr. Kanyike found this to be quite a sizeable task. As Mr. Kanyike describes, *e situation on our business before nterprise ganda training can be described as chaos. I as the master of all activit We have since recorded tremendous changes in sales customer con dence improved savings time management and accounts management*

In the five years since the training, SEU has grown considerably, adding five new branches and expanding its operations into both Rwanda and the United Republic of Tanzania. The vision of the company is to become a regional player that services countries in East Africa. With sales growth of 1,000 units per year, SEU is on its way of reaching its goal of installing 20,000 units across the region by 2010.

The success of SEU has allowed Mr. Kanyike to engage his company in a variety of new projects and services. Today, SEU brokers a project that brings solar powered lights to homes in rural villages across the country. Most recently, SEU has also started a project that uses solar powered submergible pumps to supply wells that support over 40,000 people. SEU's newest venture is to build by June 2009 a $3.4 million solar assembling plant near Entebbe, creating jobs for the local economy. Mr. Kanyike's story illustrates the possible impact and the positive multiplying effects that entrepreneurship development can have on a country.

is being placed on: 1. vocational training and apprenticeships, as exemplified by GTZ support of the Uganda Management Institute and the Vocational Training Institute and 2. on entrepreneurship development, as exemplified by the United Nations-supported business development center, Enterprise Uganda. Enterprise Uganda aims at promoting private

Box 3. Private Sector Foundation Uganda -Technology Acquisition Fund (TAF)

According to the Private Sector Foundation Uganda (PSFU), many of Uganda's exports have earned very little respect and value on the international market. Ugandan exports are considered low quality and often fail to meet international standards. In order to improve on the performance of Uganda's exports, the Government of Uganda and the European Union funded a Business Development Scheme and created a new technology acquisition fund (TAF) to assist PSFU members and exporting firms in raising skills, standards and quality of products across the export supply chain. Under this new grant scheme, export firms can be supported through the following activities:

Compensation to large firms for a portion of the costs incurred in providing on-the-job training to workers from SMEs within the export supply chain.

- Procurement of patents or manufacturing rights.
- Procurement of prototypes.
- Technology transfer to facilitate the physical development of new products.
- Acquisition of new quality control equipment.
- Staff training and other related training costs.
- Acquisition of standards (including ISO 9000).
- Consultancy costs.
- Development of new agency contracts.
- Lease/rent of overseas warehouse space.

sector development and contributing indirectly to poverty reduction through the creation of new business ventures, as well as building the competitiveness of existing SMEs. These SMEs, in turn, contribute significantly to the creation of employment opportunities and the diversification of Uganda's economy.

In particular, Enterprise Uganda was set up in October 2001 by the UNDP and UNCTAD as a one-stop enterprise development centre, assisting current and prospective entrepreneurs, mostly SMEs, to set up or improve their businesses through entrepreneurship training programmes. The training mirrors UNCTAD's Empretec model, and incorporates the ILO's 'Expand Your Business' courses and one-to-one consultancy services. Enterprise Uganda also provides business mentoring and on-site business counselling to owners/managers of enterprises. It assists them in identifying the root causes of the specific challenges their business may be experiencing, and offers informed advice to resolve identified challenges, as shown by the case of Solar Energy Uganda (box 2).

Additionally, in 2004 the Government and the European Union set up a number of initiatives aimed at training and supporting SMEs through the Private Sector Foundation Uganda (PSFU), including an enterprise innovation fund (TAF) established to stimulate innovation and technology upgrades among SMEs (box 3).

4.4. Creating TNC-SME linkages

In order to address the challenges of promoting TNC-SME linkages, the Government, private sector associations, development agencies and international donors have put in place specific measures and programmes to encourage business linkages, or 'co-operation' between Ugandan firms and overseas firms. More specifically, the following initiatives have been implemented in order to achieve the following:

- **Matchmaking capacity:** The UIA has developed a database of projects seeking joint venture partners. This has helped to promote business linkages involving local and foreign firms. Foreign embassies, particularly those from Europe, also had a key role in supporting linkages between firms from their home countries and those in Uganda. A good example is represented by Danida's "Private Sector Development Programme". Danida contracted a local marketing firm to identify suitable local firms to participate in "business collaboration" with Danish firms. The minimum requirement for the programme is the commitment of two firms, one Danish and the other Ugandan, to do joint business (box 4). The programme covers the expenses of each party visiting the other, and of the preliminary costs involved in "the initial courtship".
- **Institutional Support of Business Linkage Programmes:** The Government has worked with development partners to put in place funds and facilities that support business linkage programs. In particular, the Government and the World Bank have recently drafted a Private Sector Competitiveness Project for $71 million. At the heart of the programme is the capacity building of SMEs, which is critical to enable them to play an active role in local and international trade. In Uganda, UNCTAD has also developed a blueprint for creating sustainable TNC-SME linkages in Africa, based on the Empretec methodology (See Box 5).
- **Honest brokering:** On several occasions, both the government and the embassies have acted as honest brokers in negotiations, by supporting supplier audits and sponsoring trade fairs, exhibitions, missions and networking conferences. For example, the Ugandan Government, through the Ugandan Investment Authority, has organized investment missions abroad and hosted delegations of investors into the country. These missions are normally carried out with funding or support from the home nation. Such missions are always preceded by sector or resource endowment studies as well as the preparation of profiles of key players on both sides, which are circulated well before the event.
- **Strategic information:** Uganda's missions and commercial attachés abroad have been mandated to attract TNCs to invest in Uganda. They have been provided with strategic information on natural resource endowment, on available projects under the privatization programme, and on potential local joint venture partners. Together with the Uganda Investment Authority, the missions are in charge of diffusing brochures, providing information to prospective investors and connecting them to potential linkage partners on the ground.

5. Business linkages case studies

The case studies below outline examples of three TNCs that have established significant linkages with SMEs in the country. The studies provide insight into lessons learned and key success factors for business linkage programmes.

5.1. The case of Pheni□ □ogistics –ganda □td□ Shares –ganda □td and □ango Cooperative –nion

The business linkage studied here involves three major players: the Lango Cooperative Union, Shares Uganda Limited and Phenix Logistics Uganda Limited. Each player is involved in a different area of the cotton textiles supply chain, from farming activities in Northern Uganda to processing and exporting activities. The Lango Cooperative Union has a membership of 40,000 outgrower farmers; Shares is a farming company that is 80 per cent foreign owned and 20 per cent owned by Uganda farmers; and Phenix Logistics is a 50 per cent foreign owned company that manufactures textiles and exports semi-processed organic cotton.

Phenix Logistics was sold to Japanese investors by the Government of Uganda within the framework of Uganda's privatization programme. Today, the firm has about 260 permanent employees. In order to gain access to a steady supply of raw materials, Phenix Logistics entered into a

Box 4. The Danida Private Sector Development (PSD) Programme

The PSD Programme, a technical assistance initiative of the Royal Danish Foreign Affairs Ministry, aims at matching Ugandan and Danish firms in the same sector to exploit mutually beneficial and economically feasible business ideas. The Programme offers support for the initial preparation and implementation of the joint venture between the two companies. In the preparatory phase, it offers assistance for the identification of potential partners and financial support for the first visits and feasibility studies. A feasibility study can have a narrow scope, such as an examination of market conditions, raw material supply or the possibilities of procuring new production equipment. It can also have a broader scope, where all aspects relevant to the establishment of the cooperation are being investigated and the different financial set-up conditions evaluated. The support instruments of PSDP include: partner identification, feasibility studies, study visits and matchmaking arrangements.

The Ministry of Foreign Affairs also launched the matchmaking arrangement "TechChange", in conjunction with a number of large-scale Danish industrial and trade fairs. The arrangement consists of a shared stand, where the companies from the developing countries exhibit their products in order to establish cooperation with Danish companies. Ugandan companies get the opportunity to meet with potential partners and discuss the possibilities of future cooperation. *Tech hange* arrangements have previously taken place at the following fairs: Agromek (Agro Industry), Copenhagen International Fashion Fair (Textiles and clothing), Danfish (Fish processing), Foodtech (Food processing), Herning Industrial Fair (Industrial equipment), Scandinavian Furniture Fair (Furniture), and TEMA (Food and catering).

The PSD Programme has led to many successful outcomes. As an example, it has allowed Kinoni Produce Farm, an SME maize farm, despite its lack of experience in animal husbandry and breeding, to diversify into commercial pork production, away from maize, which is largely dependent on seasonal rainfall and is susceptible to unstable and falling prices.

Danida's Business-to-Business linkage programme matched Kinoni Produce Farm with an experienced Danish farmer for formal business cooperation. The PSD Programme also provided a study tour to Denmark, involving site visits to a number of Danish companies to learn about modern commercial pork production techniques, and covered the costs for the training of two production staff in Denmark and of project visits. Several key benefits resulting from the PSD business linkage include:

- *usiness expansion and higher pro ts*: Kinoni Produce Farm rapidly increased its breeding stock, which now produces a steady monthly income for the firm. Neighbouring farms have also acquired Kinoni Produce Farm's stock to establish their own firms.
- *Ne and e' cient production methods*: Danish technology and modern techniques, such as artificial insemination and cross breeding, were introduced, which along with training, has improved the farm's productivity and competitiveness.
- *"ong term cooperation and mar"et access*: After a prolific first phase, Kinoni Produce Farm and its Danish partner agreed to extend their collaboration for three more years. Moreover, a consensus was reached for the Danish partner to buy 20 per cent of Kinoni Produce Farm and to revamp the maize business. Kinoni Produce Farm is now able to supply to large organizations, such as the World Food Programme, and enjoys success from both the pork production and the maize projects.

Thus, not only is the Kinoni Produce Farm an interesting example of a Ugandan SME developing a business linkage with relatively minimal support from a donor funded partnership programme, but it also demonstrates the benefits of technology transfer and knowledge sharing.

Source: Danida, 2000.

business linkage programme with the locally registered Shares, which has strong links with Bo Weevil, a Dutch transnational corporation specializing in the production of organic clothing and textiles.[67] With the assistance of the Lango Organic Project, an NGO that supplies organic cotton to local and foreign customers, Shares established a business linkage with 10,000 outgrower farmers from the Lango Cooperative Union. This network of outgrower farmers provides cotton that Shares processes before consigning it to clients.

[67] Bo Weevil started buying organic cotton from the Lango Organic Project in 1996 and has been involved with the management of the project (i.e., crop financing and certification) since 1998.

Box 5. UNCTAD's Business Linkage Programme

UNCTAD's business linkage promotion programme in Uganda is being implemented by Enterprise Uganda and financially supported by the Government of Sweden. Enterprise Uganda works in close collaboration with the Uganda Investment Authority, to promote the creation of durable and mutually beneficial partnerships between TNCs and Ugandan SMEs. The goal is to bring together TNCs, their affiliates and large local companies with local SMEs, so as to enhance the productive capacity, efficiency, competitiveness and sustainability of their relationships.

As lead facilitator, Enterprise Uganda identifies SMEs, brokers and facilitates the implementation of business linkage deals and defines SMEs' capacity gaps. Specifically, Enterprise Uganda assists SMEs in access to markets, finance and ensuring the transfer of technology and know-how, including the coaching and mentoring of SMEs by TNCs. Ultimately, Enterprise Uganda acts as the "third party", championing the linkage between TNCs and local SMEs by ensuring that the upgrading process of the latter is not too strenuous on any party. The most important part played by Enterprise Uganda is the transformation of the mindset, or attitude, of the SME to take a professional approach to conducting business.

The Uganda Investment Authority contributes to the improvement of the business policy environment and brokers initial linkages with TNCs. So far, experiences with the programme demonstrate that, in spite of the productive capacity constraints of SMEs, TNCs were ready to upgrade their business relationships with SMEs into long-term relationships, provided that the SMEs were committed to remedying the shortcomings in their business systems, and to upgrading their technical and managerial skills.

Since its inception in 2005, the project has achieved the following results:

- A memorandum signed with Uganda Breweries Ltd (UBL), which assists in upgrading the members of KACOFA, a barley growers' association in Eastern Uganda which supplies barley to UBL, now benefits over 3,000 farmers.
- In Western Uganda, Kinyara Sugar Works Limited signed an agreement to strengthen its link with Kinyara Sugarcane Growers Limited. This agreement stands to benefit approximately 2,500 local farmers.
- In the telecommunications sector, two major telephone companies – Mobile Telecommunications Network (MTN) and Celtel - have signed up to upgrade their distribution network, as well as some of their local suppliers, altogether involving 12 SMEs.
- In real estate, the country's biggest real estate developer, National Housing, has signed an agreement to support 15 local suppliers.
- In the manufacturing sector, Roofings Ltd, a manufacturer of construction metal, signed a memorandum of understanding to support four of its SME suppliers of services in areas such as compound maintenance, sanitation and furniture.

Source: UNCTAD, 2006.

The formation of this network of interdependent businesses has provided many benefits to each of the stakeholders involved, allowing them to grow and improve their operations. Key achievements of the business linkage include:

- Increased profitability and guaranteed access to markets: To serve as motivation, farmers receive slightly higher prices than the prevailing market prices. In addition, farmers receive a premium for organic production. Whereas farmers may otherwise have switched to other crops, the higher prices received as a result of the business linkage have encouraged the farmers to cultivate more cotton. In addition, the farmers receive assistance with organic certification and have a guaranteed market for their crops.
- Upgrading of capabilities: As an example, Shares renovated an old malfunctioning ginnery and improved its management skills, benefiting all players in the supply chain. In addition, adequate storage facilities were established and vehicles to transport produce to the ginnery were also provided.
- Improvements in quality and quality control systems: As a result of the business linkage, internal control systems were implemented. Members receive quality training and are subject to random spot checks. This ensures, among other things, that proper weighing scales are used at all times.
- Increased access to financial and technical support: The Lango Cooperative Union was able to access financial and technical support funded by the

Swedish International Development Agency (SIDA), such as assistance with crop financing.

- Improved work environments for local workers: Phenix Logistics mainly hires local workers, and employs a few foreign technical staff for a limited period only, to train local staff. Employees work a structured week, with breaks and holidays, and receive free weekly medical check ups, as well as medical insurance and occupational health insurance.

While the partnerships have been successful, the process could be improved by overcoming a series of bottlenecks, namely: (a) the bureaucracy involved in obtaining work permits; (b) the costs of and access to finance, especially considering that funding from micro finance institutions is very expensive for farmers and interest rates are prohibitively high (e.g., 26-30 per cent per annum); and (c) the shortage of skilled and efficient workers, particularly in the operations, management and technical positions.

The Phenix Logistics and Lango Cooperative Union business linkage is a good example of a successful TNC-SME collaboration involving a number of parties each playing a significant role in the supply chain, working together to add value. Currently, Phenix Logistics processes approximately 1,000 bales of cotton and will require about 4,000 bales in the near future, when the upgrading of their production facilities and the installation of new machinery will have been completed. Phenix Logistics' long-term business development strategy is to improve its processing of organic products for overseas sale, where demand is steadily growing. The company prides itself on helping Ugandan producers reach the Japanese market, an accomplishment that would have been unthinkable without the firm's involvement.

The most promising results highlighted in this case study are the mutual benefits that accrue for the different stakeholders in a business linkages programme. This case study exemplifies how, through linkages, TNCs can gain access to a reliable supply of raw materials from local SMEs that meet their quality requirements. Conversely, SMEs can gain access to markets, technologies and training from TNCs. That said, the success of linkages programmes depends critically on an enabling environment, as better policies lead to greater benefits for the parties involved. For example, according to Phenix Logistics, since the textile/garment sector has been declared a strategic sector under the Uganda Investment Authority "Big Push" Programme, the Government should provide more targeted support and implement specific development strategies to grow and develop the sector.

5.2. *The case of –ganda Breweries ☒td and the Kapchorwa Commercial Farmers☒ Association*

Uganda Breweries Limited (UBL), a subsidiary of Kenya Breweries Limited and a joint venture with Guinness Breweries Worldwide, is one of the premier breweries in Uganda. The company had been procuring barley from abroad for its beer brewing operations, but reconsidered its sourcing options following South African Breweries Limited entry into the market.[68] By buying some inputs locally, UBL sought to demonstrate its commitment to supporting the local economy, thereby distinguishing the brand from its anticipated competition and maintaining its market share.

The main challenge to this new sourcing strategy was finding an intermediary between UBL and smallholder farmers scattered across Uganda. The Kapchorwa Commercial Farmers Association (KACOFA) was identified as a possible intermediary, and in 2005 Enterprise Uganda initiated a business linkages agreement that was signed between UBL, Enterprise Uganda, and KACOFA, within the framework of the UNCTAD Business Linkage Programme.

Under the memorandum of understanding, UBL and Enterprise Uganda agreed to provide business support services to 2,000 barley farmers in KACOFA for a two-year period. Enterprise Uganda was given the task to provide technical and managerial training to the members and to upgrade the service facilities of the association. To show a "sense of ownership and commitment" by the farmers, KACOFA contributed 20 per cent of the project's total cost, UGX 60 million, or roughly $34,000. UBL and Enterprise Uganda contributed the remaining funds.

The partnership agreement was signed with the aim of increasing the production of equatorial barley by the KACOFA commercial farmers, while at the same time upgrading and strengthening their management skills. Farmers in the area had for too long been dependant on growing maize, with no alternative cash crops to augment their income. Under the contract, UBL guaranteed KACOFA farmers a concrete purchase quantity at a minimum purchase price, an agreement that protected the farmers against commercial risks. In return, UBL was able to purchase an uninterrupted supply of barley at prices better than import prices. Furthermore, under this agreement, UBL was protected against having this barley sold to its competitor in the country. In the two-year period from 2005 to 2007, the business linkage programme has helped KACOFA achieve several marquee results, such as:

- Expansions in market access: UBL has extended an open order to KACOFA, offering to buy all the barley the association produces, an amount close to 4,000 tons. In addition, KACOFA has been able to expand its customer base to other international buyers, such as linking to the World Food Programme and securing a contract to sell five thousand tons of maize over a period of two seasons.
- Upgrading of capabilities and increasing the "value added": Not only is KACOFA gaining access to more markets, but it is also commanding better prices for the increased value and quality of its goods. For example, through the business linkage programme, KACOFA has been able to consistently upgrade its service facilities. Today the association is engaged in semi-processing, i.e., drying, cleaning, bagging and

[68] South African Breweries acquired the Miller Brewing Company in 2002, becoming SABMiller plc, and is one of the largest breweries in the world.

supplying. By vertically integrating their operations, KACOFA has been able to increase the price of its barley from UGX 455 to UGX 610 per kilogram.

- Increased access to credit and capital: As a result of a negotiated term with Centenary Rural Development Bank, KOCOFA members now have more access to credit services, with farmers receiving loans of UGX 400,000 to UGX 5 million. KACOFA has also procured agricultural equipment through a leasing arrangement with DFCU Bank.
- Improved governance and increased membership: KACOFA has matured into a stronger, better organized association. Over the past two years, KACOFA's membership has increased nearly twofold, from approximately 1,500 to 3,000 farmers. As a result of improved governance and benefits, members have started paying registration and annual subscription fees. Further, KACOFA's increased visibility and internal capacity resulted in it winning the 2006 National Civil Organizations Award given by the European Union through Prime Minister's office.

Much of KACOFA's success is attributed to its partnership with UBL. UBL's operations director, Mr. Rick Chambers, attested that: "UBL is committed to continue to source and use local materials. We have a policy of ensuring that at least 75 percent of our raw materials are sourced locally and Kapchorwa farmers have been a great example of our intentions to uplift local economies while benefiting Ugandan consumers." Mr. Chambers said UBL's target is to source about 10,000 tonnes of barley annually by stepping up its support to farmers. UBL is benefiting from this relationship in a new way, as the crop is now used in the marketing of a new lower-end brand of beer, Senator Lager. This brand has become very affordable due to a lower excise duty imposed on it by the government - a result of its satisfaction with the linkage programme. If the partnership continues smoothly, Chambers said Kapchorwa farmers had the potential to earn UGX 4 billion (or approximately $2.3 million) per year from the company through barley production.

This case exemplifies one of the key factors of successful business linkages: the participation of various organizations beyond just the TNC and SME. The inclusion of governments, NGOs and business development service providers, in this case Enterprise Uganda, made it feasible and worthwhile for the TNC to liaise with SMEs.

5.3. The Case of Kinyara Sugar Works Limited and Kinyara Sugarcane Growers Limited

Kinyara Sugar Works Limited (KSWL), one of Uganda's leading sugar producers, is a transnational corporation jointly owned by the Rai Group (51 per cent) and the Government of Uganda (49 per cent). The company sources a large portion of its sugarcane from a network of outgrowers, Kinyara Sugarcane Growers Limited (KSGL), which was founded as an association of sugarcane farmers in 1996 and registered as a limited liability company in 2001. Currently KSGL provides harvesting, plowing and weeding services to its member farmers, as well as a credit scheme that allows farmers to save and access small loans.

Both KSWL and KSGL experienced challenges in their original relationship. Firstly, KSWL found it difficult to work with a network of more than 1,000 disaggregated homesteads, which suffered from leadership issues and communication problems. Secondly, KSWL could not completely rely on the sugarcane production by KSGL, because outgrower farmers failed to plant the quantity or quality of sugarcane that they had initially agreed upon. KSWL also wanted to expand its operations, but found that KSGL had difficulty attracting new farmers. On the other hand, the members of KSGL felt that they lacked a strong voice to negotiate competently with KSWL and the Government on sugarcane pricing and other matters, such as taxation and pay periods.

The companies approached Enterprise Uganda, which, in collaboration with the UIA, UNDP, and UNCTAD and with financial assistance from the Swedish Government, was able to act as an intermediary between KSGL and KSWL in a two year business linkage pilot program. Enterprise Uganda's intervention focused chiefly on "farming as a business" and involved developing and implementing a long term strategic business plan, creating a formal corporate governance and organizational structure, and addressing KSGL's leadership and cash flow problems. In September 2005, KSWL, KSGL and Enterprise Uganda signed a memorandum of understanding under which KSGL would match the growth plans of KSWL for the following three years, a crucial step that required KSGL to think long term and commit to quantity and quality guidelines. Through the advice and assistance of Enterprise Uganda, the business linkage between KSWL and KSGL has strengthened and grown to include approximately 2,500 farmers. Enterprise Uganda's intervention has yielded significant benefits for both parties involved, the most important of which include the following:

- Improvements in road access: Prior to the intervention the network of farmers was too disaggregated to lobby effectively. However, Enterprise Uganda, together with the UIA, was able to assist KSGL in contacting the local government for a system of feeder-roads to improve access to farms.
- Refund of excess duties charged: Whereas prior to Enterprise Uganda's intervention farmers were subjected to withholding tax, the linkage programme successfully lobbied the Uganda Revenue Authority to refund excess duties levied on farmers, which were deducted by KSWL and passed over to the URA. As a result of this policy intervention effort by Enterprise Uganda and the UIA, KSGL received a refund totalling approximately $0.7 million and member farmers will no longer have the withholding tax deducted from their incomes.
- Increased productivity and profitability: Productivity and profitability have increased as a result of

Enterprise Uganda's intervention, the improvements in road access and the removal of excess duties. In addition, farmers are now paid much earlier, within one month, in comparison to the four month delays experienced prior to the intervention.

- Improvements in quantity and quality of sugarcane: Addressing KSGL's leadership and organizational issues and working closely with KSWL has allowed KSGL to adopt a long term business plan that matches KSWL's expansion plans. As a result, KSGL can now guarantee the quantity and quality of sugarcane required by KSWL, which in turn, can expand its operations in response to having a reliable source of inputs. KSGL currently supplies up to 52 per cent of KSWL's sugarcane inputs and will supply higher volumes as KSWL's production increases from 64,000 to over 100,000 tons of sugar annually in the next three years.
- Increased access to capital: Having a long-term strategic plan allowed KSGL to qualify for a loan of UGX 200 million from the Micro Finance Support Centre. In fact, KSGL currently has loans totalling approximately UGX 900 million or approximately $500,000. In addition, KSGL has initiated a savings and credit cooperative that allows member farmers to save and access small loans.

The success of the intervention depended on three key factors. Firstly, both KSGL and KSWL had a mutual interest in strengthening the business linkage; in fact the goodwill between KSWL and KSGL was very strong, which enabled the partnership to be effected. Secondly, both KSGL and KSWL committed to a long term relationship, including an assurance of market access by KSWL and guaranteed production levels by KSGL. Thirdly, Enterprise Uganda worked with "community champions," opinion leaders in KSGL who, once convinced of the benefits of the intervention, were able to influence other key members and effect the required changes. However, the intervention also faced challenges. For example, when the programme started, KSWL was fully owned by the Government and under Booker Tate management. Changing ownership and management required that the goodwill of the new management had to be immediately sought.

This case similarly highlights the benefits that accrue to both TNCs and SMEs participating in a business linkage program and the crucial role that enterprise development and investment promotion programmes play as intermediaries to strengthen those relationships. In this case, the TNC was able to rely on local farmers for the quality and quantity of inputs it needed, allowing it to expand its operations. The outgrowers, by uniting together under a stronger, cohesive leadership, were able to improve their productivity, increase their profitability and expand their membership base, thereby allowing the benefits of the business linkage to extend to additional farmers.

6. Lessons learned and recommendations

From the analysis of the three case studies, the following conclusions have been identified as key success factors in the creation of TNC-SME linkages in Uganda:

Identifying a viable business idea

- The existence of a viable business idea that can be realized by SMEs and TNCs is fundamental and is the starting point for a lasting linkage programme. TNCs will not engage in business with SMEs unless the relationship makes good business sense. The ability of SMEs to produce goods and services in sufficient quantities and to meet international quality standards is also very important.

Relying on highly reputed intermediary institutions

- Existing limitations in capacity, technology, or infrastructure can be reduced or reversed if there are good intermediaries or brokers who can help bridge the gap between TNCs and SMEs. The Enterprise Uganda Linkages Programme, the Danida Private Sector Development Programme and the technical support provided by the Swedish Development Agency, as mentioned in the above case studies, represent good examples of how experienced, well-connected, reputable intermediaries and programmes can broker business linkage agreements. Further, it shows how they mitigate the risks and negative perceptions of TNCs dealing with SMEs.

Removing obstacles and perceived barriers to linkages creation

- A supportive investment or regulatory environment can significantly affect the success of business linkages. For example, a reduction in excise duty on barley in the case of Uganda Breweries helped develop a market for a brand new product. The case study also revealed that a number of bottlenecks may hamper the development of successful business linkages, and therefore need to be duly addressed by effective linkages programmes. In particular, TNCs expressed concerns regarding the product quality and managerial skills of SMEs, as well as their reliability in respecting agreed delivery times. On the other hand, SMEs feared being "swallowed up" by TNCs and becoming over-dependent on one single customer. They also expressed that limited access to funding and credit made it difficult to engage in transactions with TNCs and argued that due to the small number of TNCs in Uganda, the opportunities for creating linkages were too limited.

In order to improve opportunities for establishing mutually beneficial business linkages, a series of recommendations can be distilled from the Ugandan case, namely:

- Linkages should be strategically targeted. For example, TNCs involved in domestic resource utilization (e.g. agro processing) are more likely to require or support SME linkages in Uganda than TNCs that depend on foreign sourced inputs, such as those involved in high technology products.
- Training programmes should emphasize vocational skills, entrepreneurship training and apprenticeships which develop practical skills to help growing businesses. Particularly in situations where companies are small and scattered, it pays to have an intermediary such as an NGO, a BDS provider or a co-operative union to provide training services and link TNCs and SMEs.
- The government should strengthen linkage promotion agencies or institutions such as the Uganda Investment Authority and the Uganda Export Promotions Board. These organizations need their capacities improved to increase awareness of the possibilities for and the potential benefits of TNC-SME linkage programmes.
- In many instances, it helps if the initial costs of linkage creation incurred by a TNC are covered by a third party through government support programmes. This increases the chance that a TNC will choose to rely on local suppliers. At the same time, in a country like Uganda, where lack of access to financing is a major constraint facing domestic suppliers, the challenge is to encourage TNCs to provide financial support to their domestic suppliers.[69] But once the TNC has realized the benefits of the structured linkage, they have shown willingness to support subsequent arrangements to assist the SME to grow further.
- Business associations have an important role to play in facilitating and enhancing the formulation of TNC-SME linkages. The effectiveness of their role is directly related to the level of public-private sector dialogue. Important measures taken by business associations not only support and complement governmental policies but also tailor them more appropriately to the needs of the enterprise community.

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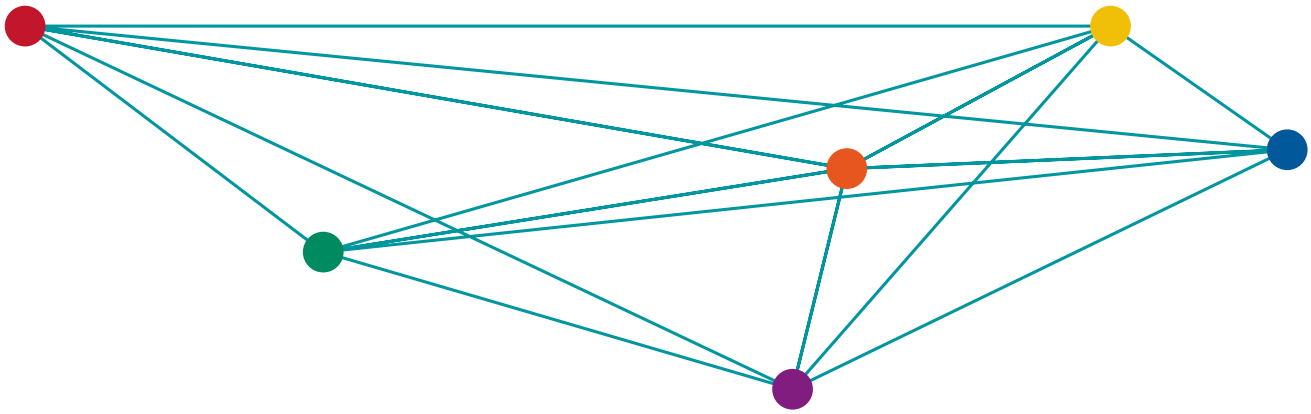
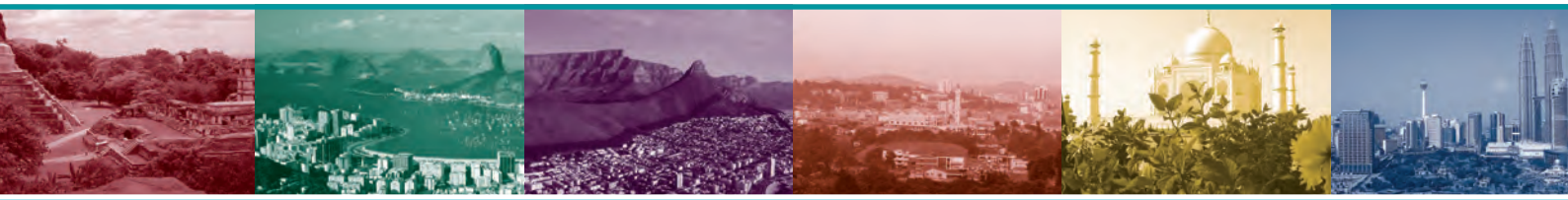
[69] This can be encouraged by various government measures such as: a. encouraging shorter payment delays through tax measures; b. making arrangements to guarantee the recovery of delayed payments; c. offering indirect financing to suppliers channelled through their buyers; d. offering tax credits or reductions and other fiscal benefits to firms providing long-term funds to suppliers; e. co-financing supplier development programmes along with the private sector.





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