

INTEGRATING SMEs IN GLOBAL VALUE CHAINS

Towards Partnership for Development



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
economy environment employment

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**Foreword by
Carlos Magariños
Director-General of UNIDO**



The prominent role of private enterprise in driving economic and social development in general, and industrial development in particular, has come to be widely recognized in recent years. This has resulted in both multilateral and bilateral development cooperation agencies coming to see the business community as an increasingly valuable partner in pursuit of their development-oriented activities, and the establishment of numerous public-private partnership programmes. It is in this spirit that the Secretary-General, Mr. Kofi Annan, has called for a deepening of the ties between the United Nations and business with the aim of “finding new synergies and learning how to make the most of each other’s comparative advantages”, and has launched the Global Compact as a vehicle to “unite the powers of markets with the authority of universal ideals”.

As the specialized agency of the UN system mandated to promote industrial development in developing countries and transition economies, with a special focus on the promotion of small and medium-sized enterprises (SMEs), UNIDO is particularly well-placed to engage in such collaborative ventures. I am pleased to say that it has consequently been at the forefront of the UN efforts to create development-oriented partnerships with the business community. Within a year of my assuming office in December 1997 we had launched our partnership programme with a pilot project to enhance the competitiveness of SMEs producing automotive components in India through the establishment of a multi-sectoral partnership comprising not only ourselves and the Government of India, but also TNCs, academic and research institutions, civil society organizations, and the appropriate industry associations. In the meantime, this very successful and still ongoing project has been followed up by the establishment of several new partnership projects with a variety of different corporate partners and in a number of different countries and sectors.

With these operational activities having enabled UNIDO to gain valuable practical insights into the strengths and weaknesses of such a partnership approach to development cooperation, the Organization has now begun to take steps to formalize a conceptual framework to guide the programme in the future. To this effect, it hosted a very rewarding Expert Group Meeting in October 2000 to supplement the lessons learned from its own experiences and draw on the experience and expertise of a wide range of researchers and practitioners in the field of industrial development, from both the public and private sectors. The participants offered very informative presentations on the scope for collaboration between the United Nations and the business community, the role of public-private partnerships in economic and industrial development, the activities of TNCs in SME development through their supplier and vendor development programmes, and the potential contribution of official development agencies to the integration of developing-country SMEs into global value chains. The proceedings of this meeting were published in May 2001.

The present document represents a further step in the effort to establish a sound conceptual basis for UNIDO's partnership programme with the business community. As such, it surveys the changing role of the private sector in economic and industrial development, reviews how the formation of TNC-SME linkages and the insertion of SMEs into global value chains can contribute to SME development, and assesses the measures that national and multinational bodies such as UNIDO can take to promote such development in partnership with the business community. It therefore provides a valuable insight into the purposes and benefits of entering into such development-oriented partnerships with the business community. This is of relevance not only to UNIDO but to all researchers and practitioners of development-related activities.

Carlos Magariños

EXECUTIVE SUMMARY

- ❑ Many developing countries have moved decisively towards a trajectory of trade policy liberalization and globalization. These policies have improved the welfare of many, but absolute impoverishment remains a major problem in the global economy, and relative impoverishment (i.e. inequality) has also widened almost everywhere.
- ❑ Developing countries have significantly increased their share of global manufactured exports since 1985. Most of these gains were made between 1985 and 1995, however, and a large and growing share (now more than 70 per cent of the total) comes from only 10 developing countries. Developing countries had a stable share of FDI during the 1990s. China has become a dominant party, both in its share of incoming FDI and of developing country manufactured exports.
- ❑ The losers from globalization are not confined to those who have been excluded from global processes. The issue is therefore not so much whether to participate in the global economy, but how to do so in a manner which provides for sustainable income growth. This is a particular problem for poor producers, and for SMEs. The prevalence of losers in liberalized economies suggests that there remains an important role for government policy. But this policy agenda differs from the previous era of import-substituting industrialization (before the mid-1980s) and when deregulation and liberalization policies were being implemented (between the mid-1980s and 2000).
- ❑ The lessons from international experience suggest that the path to sustainable income growth lies in the capacity to upgrade. The lessons from value chain analysis suggest that upgrading must be seen in a systemic context, involving process, product, functional and chain upgrading. The ability to meet changing process and product standards is an increasingly important requirement for process upgrading.
- ❑ Yet upgrading in itself may not be adequate to provide for sustainable income growth. Efficient producers need to be connected to appropriate final markets, and here too value chain analysis has a key role to play in assisting producers in general, and SMEs in particular to participate effectively in the global economy.
- ❑ There are four major conduits which connect producers to final markets—selling into final markets on an arms-length basis; as clusters of producers with similar levels of power; by feeding into value chains where an unrelated party coordinates global production networks; and as part of a TNC-family.
- ❑ During the 1990s, FDI flows to developing countries increased significantly, although to some extent and in some areas, much of this involved the acquisition of privatized State assets. However, trade flows increased even more

rapidly, and in some sectors, trade through quasi-hierarchical governed value chain networks substituted for FDI as industry leaders subcontracted production to low-cost economies. This does not mean that TNCs became less important in global economic activity, but that many of them changed their role from being global producers to become global buyers and global coordinators (“governors”). This is particularly evident in the buyer-driven chains.

- ❑ Experience from many countries, including developing countries, shows that SMEs can indeed participate effectively but almost always this requires that they cooperate to achieve collective efficiency. This cooperation may either be horizontal (for example, exporting as a network of firms), or vertical (for example, exporting through incorporation in global value chains).
- ❑ TNCs often take active steps to improve the capabilities of their suppliers (although not so frequently as text-books might suggest). They also sometimes assist customers. However, these efforts seldom progress beyond the first tier, and invariably miss SME suppliers and customers. Moreover, there is a pervasive pressure on TNCs to reduce their number of suppliers, and this increasingly has the effect of removing many SMEs from the supply chain.
- ❑ It is in this context that the upgrading of SMEs should be initiated. Two basic sets of policies are required to meet this agenda. The first are policies which are specifically targeted at SMEs, designed to assist their upgrading directly, either as individual producers or as a network of producers. The second set of policies are those which target roles played by large firms—including TNCs—in intermediating the indirect participation of SMEs in global product markets. Of course, these two sets of policies are complementary rather than exclusive.
- ❑ In assessing feasible policies, a framework needs to be used which focuses on the conduits in which SME producers can enter global product markets, namely through impersonal, market-based sales; through network-based collective efficiency; through governed quasi-hierarchical value chains; and through hierarchical FDI networks.
- ❑ The development of required skills and capacities often necessitates targeted efforts by specialized agencies and institutions which have to augment the signals and incentives for upgrading provided by the markets. In this context, multinational organizations such as UNIDO can play an important catalytic role in supporting SME upgrading. Through their global outreach and experience they can provide access to international best practices in the establishment of conducive policy frameworks for SME development. Similarly, they can help to identify and disseminate the lessons learnt by successful support institutions in various parts of the world. Finally together with a multitude of business and other partners (governments, research institutions, industry associations, and civil society organizations), international development organizations such as UNIDO can design and implement industry-specific SME upgrading programmes focusing on the integration of lower-tier SMEs in global value chains.

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INTRODUCTION

From the perspective of industrial development in developing countries, the twentieth Century can broadly be divided into three eras. Before 1950, industrial development took place in an environment of largely isolated national factor and product markets with limited international linkages. The relatively high costs of transport, allied to the growth of incomes fuelled by commodity exports, led to the establishment of local industry, focused on non-durable consumer goods (particularly food) and some commodity processing. As a result of this, industrial development progressed most rapidly during periods when developing countries were cut off from global markets, as in the Great Depression and during the two World Wars.

The second phase was roughly between 1950 and 1980. Stimulated both by widespread decolonization and the demonstration effect of rapid industrial development in the Soviet Union, a great many developing countries took active steps to stimulate industrial development by protecting domestic producers from imports, and providing a range of incentives targeted at specific sectors and types of producers.

Finally, in the last two decades of the century, these regimes of protection and subsidies were overturned, with increasing rapidity and pervasiveness. Attracted by the positive experience of the East Asian countries which had promoted vigorous outward-oriented growth, and responding to pressure from multilateral agencies and bilateral donors, virtually all developing countries revised their industrial policy regimes. They increasingly dismantled incentive systems (liberalization) and forced producers to operate on a global platform (globalization).

In many respects, therefore, the recent history of industrial policies in the developing world has been an agenda of trade policy reform. But now that most countries have moved to a path of deregulation, liberalization and globalization, the industrial policy agenda has been reframed:

Is there a need for industrial policies which promote industrial development in developing countries to sustain income growth, or will market forces alone deliver the desired result?

As we shall see, the operation of pure market forces in a global context does not in itself provide the conditions for sustained income growth. Global competition is so intense that unless deliberate policies are introduced to foster a systematic programme of upgrading, producers may engage in a race to the bottom, entering a trajectory of immiserizing growth in which economic activity expands, but real incomes fall.

The challenges confronting small and medium-sized enterprises (SMEs), either as producers selling directly into global markets, or through their incorporation into

global value chains, are particularly acute. This poses a severe risk to the development process, to which SMEs make a vital contribution for the following reasons:

- ❑ SMEs are more labour-intensive and tend to lead to a more equitable distribution of income than larger enterprises by generating increased levels of employment and thus alleviating poverty. They often provide employment opportunities at reasonable rates of remuneration to workers from poor households and women who have few alternative sources of income.
- ❑ SMEs contribute to a more efficient allocation of resources in developing countries by adopting labour-intensive production methods, which more accurately reflect the resource endowments in developing countries where labour is plentiful and capital is scarce. To the extent that these enterprises operate in “informal” markets, the factor and product prices they face also provide a better reflection of social opportunity costs than the prices faced by large enterprises.
- ❑ SMEs support the building of systemic productive capacities. They help to absorb productive resources at all levels of the economy and contribute to the establishment of dynamic and resilient economic systems in which small and large firms are interlinked. They also tend to be more widely dispersed geographically than larger enterprises, support the development and diffusion of entrepreneurial spirit and skills, and help to reduce economic disparities between urban and rural areas.

Empirical evidence shows, moreover, that at all levels of development SMEs constitute the driving force in economic development in general and industrial development in particular. They comprise more than 90 per cent of all enterprises in the world, and account for 50 to 60 per cent of total employment. SMEs engaged in manufacturing often account for an even larger share of manufacturing employment, which may rise to as high as 80 per cent. In the least developed countries (LDCs), UNIDO's priority clients, the role is even more important since SMEs often offer the only realistic prospects for increases in employment and value-added. This applies equally to the countries with economies in transition, where large inefficient State-owned enterprises are giving way to much smaller and more efficient private entities.

With SMEs thus providing the backbone of the private sector not only in developed countries but also in developing countries and countries with economies in transition, UNIDO has adopted SME development as one of its principal objectives. In pursuing this goal, the Organization has increasingly sought to engage in partnerships with the business community, and especially with transnational corporations (TNCs), who are themselves often actively engaged in promoting SMEs in developing countries and transition economies as part of their global vendor and supplier development programmes. By forging successful partnerships of this nature, both UNIDO and the international business community can take advantage of the synergies between their respective activities, and thereby achieve a positive developmental impact.

This paper is divided into four parts. We begin in part one by reviewing two important dimensions of developing country participation in the global economy—trade and FDI. Then, in part two, we analyse the way in which sub-optimal insertion in the global economy may result in immiserizing growth. From this it is possible to identify four major areas of upgrading, focusing on the particular challenges which these pose to SMEs. Following this, we identify the various ways in which SMEs may be incorporated into global product markets, distinguishing TNC-linked value chains from those involving non-equity forms of governance and arms-length trading relationships. This is followed by a review of the experience of clustered networks of SMEs, showing how joint action can act to promote effective participation in global markets.

Following this, part three addresses the policy implications which arise in assisting SMEs to participate gainfully in global product markets. This returns to the categories identified in part one, namely that:

- ❑ Developing country producers are linked into the global economy in four major ways—as producers selling into final markets on an arms-length basis; as clusters of producers with similar levels of power; by feeding into value chains where an unrelated party coordinates global production networks; and as part of a TNC-driven vertically integrated network.
- ❑ The challenge of *upgrading* is best understood within a value chain framework which distinguishes between process, product, functional and chain upgrading.

In this context, part three provides a number of specific policy recommendations to assist SMEs, either as individuals or as members of networks, to access international product markets and global value chains.

Part four, finally, assesses the scope for public-private partnerships in formulating and implementing the proposed policy measures, and the extent to which UNIDO can play a catalytic and supportive role in this process. In particular, it addresses the potential role that the Organization can fulfil as a facilitator for such partnerships and as an agent for enhancing the developmental impact of international industrial linkages. While concluding that the support functions UNIDO could offer in these fields would be provided mainly at the policy and institutional levels, part four notes that UNIDO could also provide support in the “matchmaking” efforts between local and foreign enterprises.

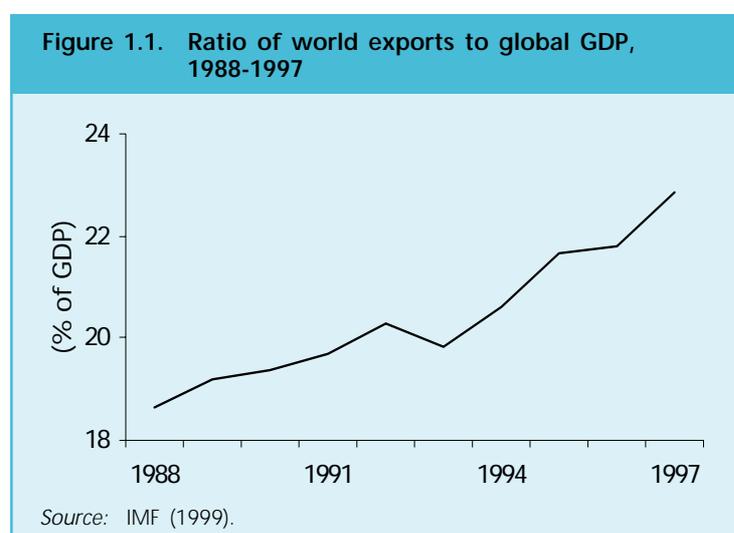
PART ONE

1. THE INTEGRATION OF DEVELOPING COUNTRIES IN THE GLOBAL ECONOMY: TRADE AND FDI

This Report is concerned with identifying policies which can support the effective participation of developing countries in global product markets. At one level, the extent of this participation can be gauged by the size, nature and growth of developing country exports. But not all exports occur through the participation of developing country firms as independent sellers into global markets (either acting individually or in combination with other firms). In many cases, and indeed in an increasing number of cases, developing country exporters participate in global product markets through their incorporation in global commodity chains, often involving foreign direct investment (FDI). For this reason it is instructive to begin with a brief overview not only of developing country participation in global trade but also in global FDI trends, before we assess how developing country SMEs can be assisted to participate effectively in the global economy.

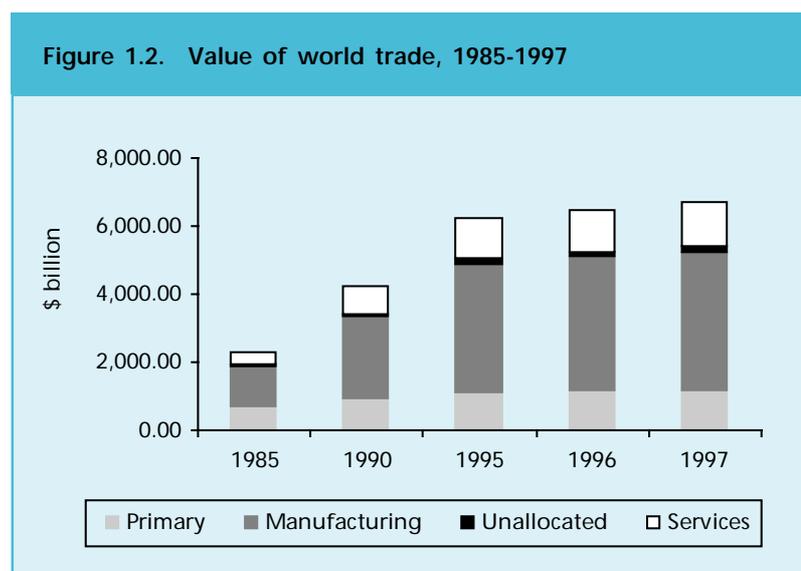
1.1. Developing countries and trade flows

For most of the last quarter of the 20th century, trade grew more rapidly than global output. The world economy was becoming increasingly integrated. As shown in figure 1.1,



by the end of the century the aggregate value of global trade was equivalent to almost one-quarter of global GDP.¹

The size and composition of world trade has changed significantly during the last three decades of the 20th century, however. The period between 1985 and 1995 was a period of particularly strong expansion, after which growth slowed in the second half of the 1990s, as illustrated in figure 1.2.² Between 1985 and 1997, total world trade grew from \$2,311 billion to \$6,735 billion. While manufactures represented the largest single component by value (60 per cent of the total in 1997), service exports recorded the most rapid growth (from 16 per cent to 20 per cent of the total).



These developments were accompanied by a significant shift in the share of different groups of countries in world trade between 1985 and 1997. In particular, developing countries recorded a major gain in their share of global trade in manufactures. Thus, while total world exports in manufactures increased by 242 per cent between 1985 and 1997, developing country manufactured exports increased by 516 per cent.

As a result, the share of developing countries in total world manufactured exports increased substantially from 14.6 per cent in 1985 to 26.2 per cent in 1997. During the same period, the share of manufactured exports from developed countries and from Central and Eastern Europe fell from 78 per cent to 71 per cent and from 7.1 per cent to 2.8 per cent respectively. Perhaps surprisingly, the share of the developed countries in primary products rose during the second half of the 1980s and remained stable thereafter. These trends are illustrated in table 1.1.

A particularly rapid growth in the export of manufactures from developing countries was recorded in the 1990s. Figure 1.3 shows that the index of developing country manufacturing exports grew by 83 per cent between 1992 and 1997, closely followed by services at 80 per cent. The value of primary product exports grew by only 34 per cent.

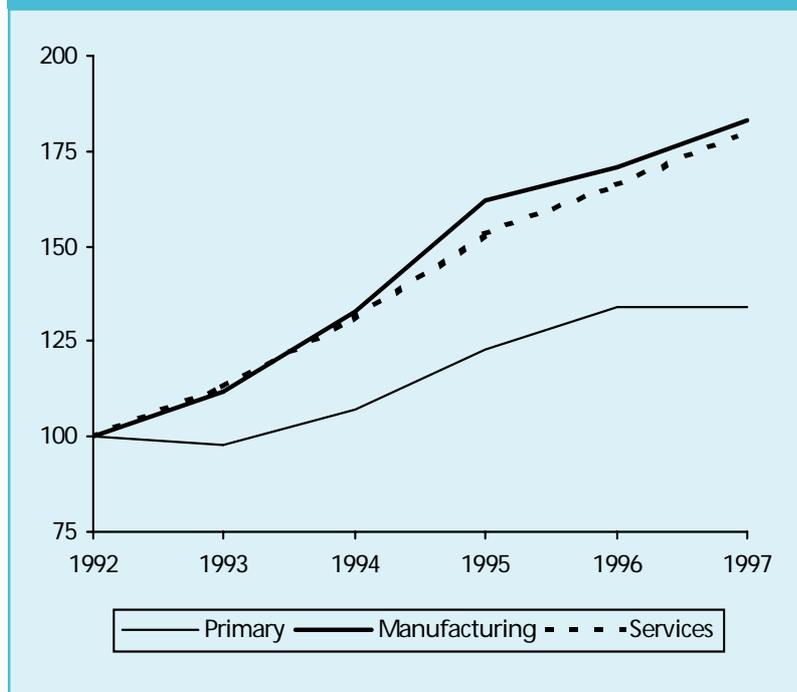
¹Care must be taken with this ratio, since GDP is a value added concept, whereas trade takes no account of the double counting involved as inputs are imported for partial transformation. Thus it is the change in the ratio of trade to GDP which is important, rather than its absolute size.

²Figures 1.2-1.5 and tables 1.1-1.3 are based on data adapted from UNCTAD (2000a).

Table 1.1. Share of world exports by sector and region, 1985-1997
(percentage)

	1985	1990	1995	1996	1997
<i>Primary</i>					
Developed countries	44	50	53	52	51
Developing countries	45	39	40	41	41
Central and Eastern Europe	10	10	7	7	7
<i>Manufacturing</i>					
Developed countries	78	79	72	72	71
Developing countries	15	18	25	26	26
Central and Eastern Europe	7	3	3	3	3
<i>Services</i>					
Developed countries	77	80	73	73	72
Developing countries	21	19	23	23	24
Central and Eastern Europe	2	1	4	4	4

Figure 1.3. Index of exports from developing countries, 1992-1997



Although the share of developing countries in total world trade in manufactures grew significantly, the overwhelming share of developing country manufactured exports originated from Asia. Figure 1.4 shows that Asia's share of developing country exports grew from 78 per cent in 1985 to 86 per cent in 1997. However, most of this change in shares occurred between 1985 and 1990, after which regional shares remained fairly stable.

Despite the growth in the global share of the developing countries' manufactured exports, developed countries have remained the principal exporters of manufactured products. The data presented in table 1.2 show that of the ten largest exporters of manufactured products, China is the only developing country. Its share rose from 1 per cent to 4 per cent between 1985 and 1997.

Figure 1.4. Share of exports of manufactured goods from developing regions 1985-1997
(per cent)

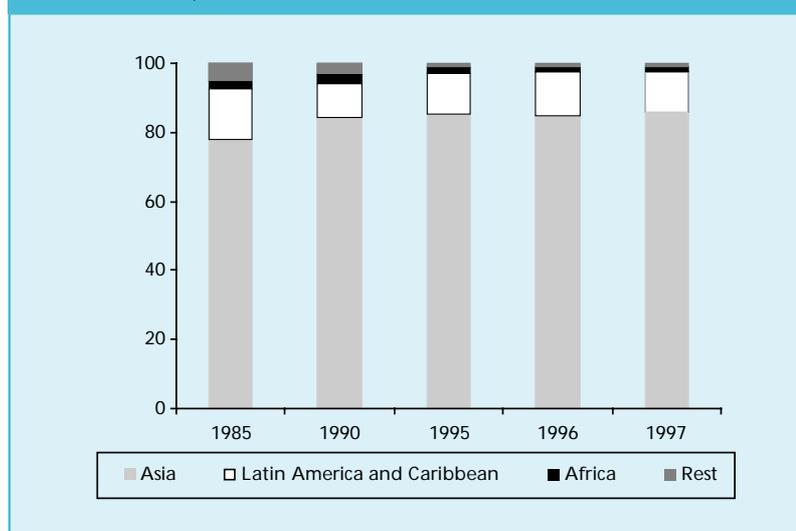


Table 1.2. Value and share of ten highest-ranking exporters of manufactured goods, 1985-1997

	Value (US\$ million)		Share of world exports (%)	
	1985	1997	1985	1997
United States	143,413	513,931	12	13
Germany	..	441,050	..	11
Japan	169,397	397,815	14	10
United Kingdom	66,139	231,895	6	6
France	71,945	221,464	6	5
Italy	66,967	212,688	6	5
China	9,316	155,953	1	4
Canada	50,754	134,417	4	3
Belgium-Luxembourg	37,765	132,111	3	3
Netherlands	34,472	130,581	3	3

In addition, developing country exports of manufactured goods are highly concentrated. As indicated in table 1.3, the share of the ten largest developing country exporters of manufactures grew from 8 per cent to 20 per cent of total global manufactured exports, and from 66 per cent to 72 per cent of total developing country manufactured exports, between 1985 and 1997.

Table 1.3. Value and share of ten highest-ranking developing countries exporting manufactured goods, 1985-1997

	Value US\$ million		Share of world exports (%)		Share of developing countries' exports (%)	
	1985	1997	1985	1997	1985	1997
China	9,316	155,953	1	4	5	15
Rep. of Korea	27,643	118,255	2	3	16	11
Taiwan Province	27,570	113,460	2	3	16	11
Singapore	11,651	104,731	1	3	7	10
Mexico	..	88,824	..	2	..	8
Malaysia	4,256	60,216	0	1	2	6
Thailand	2,689	41,113	0	1	2	4
Brazil	11,227	28,033	1	1	6	3
India	5,193	25,703	0	1	3	2
Hong Kong	15,790	25,479	1	1	9	2
Share of total			8	20	66	72

1.2. Developing countries and capital flows

Global capital flows can be decomposed into two major categories:

- ❑ Official flows (multilateral and bilateral aid), and
- ❑ Private flows.

In turn, private flows can be decomposed into:

- ❑ Portfolio investment (which includes equity capital) and various forms of lending, and
- ❑ FDI.

The data presented in table 1.4 show that overall capital flows to developing countries trebled during the 1990s, rising from just under \$100 billion in 1990 to over \$340 billion in 1997, before falling back to around \$290 billion in 1999.

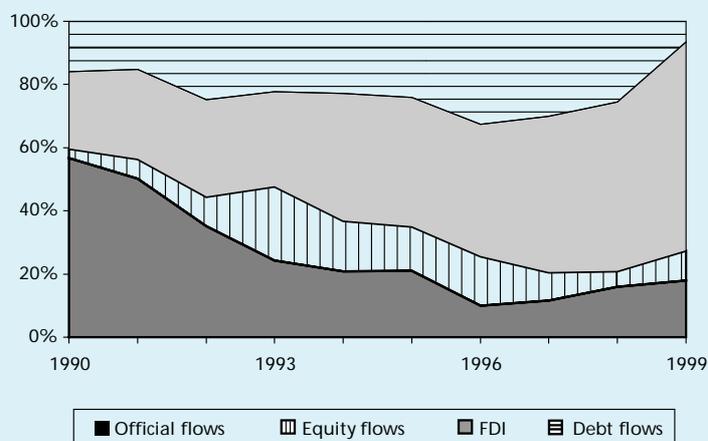
Although substantial volumes of equity finance and loan capital have been directed to developing countries to finance increased production for domestic and export markets, the recorded overall increase in capital flows was driven largely by a sharp rise in FDI. As shown in figure 1.5, the share of FDI in total capital flows to developing

Table 1.4. Capital flows to developing countries, 1990-1999
(US\$ billion)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	98.5	124	153.7	219.2	220.4	257.2	313.1	343.7	318.3	290.7
Official flows	55.9	62.3	54	53.4	45.9	53.9	31	39.9	50.6	52
Private flows of which	42.6	61.6	99.7	165.8	174.5	203.3	282.1	303.9	267.7	238.7
International capital markets of which	18.5	26.4	52.2	99.8	85.7	98.3	151.3	133.6	96.8	46.7
Debt flows of which	15.7	18.8	38.1	48.8	50.5	62.2	102.1	103.4	81.2	19.1
Bank lending	3.2	5	16.4	3.5	8.8	30.4	37.5	51.6	44.6	-11.4
Bond financing	1.2	10.9	11.1	36.6	38.2	30.8	62.4	48.9	39.7	25
Other	11.3	2.8	10.7	8.7	3.5	1	2.2	3	-3.1	5.5
Equity flows	2.8	7.6	14.1	51	35.2	36.1	49.2	30.2	15.6	27.6
FDI	24.1	35.3	47.5	66	88.8	105	130.8	170.3	170.9	192

Source: World Bank (2000a).

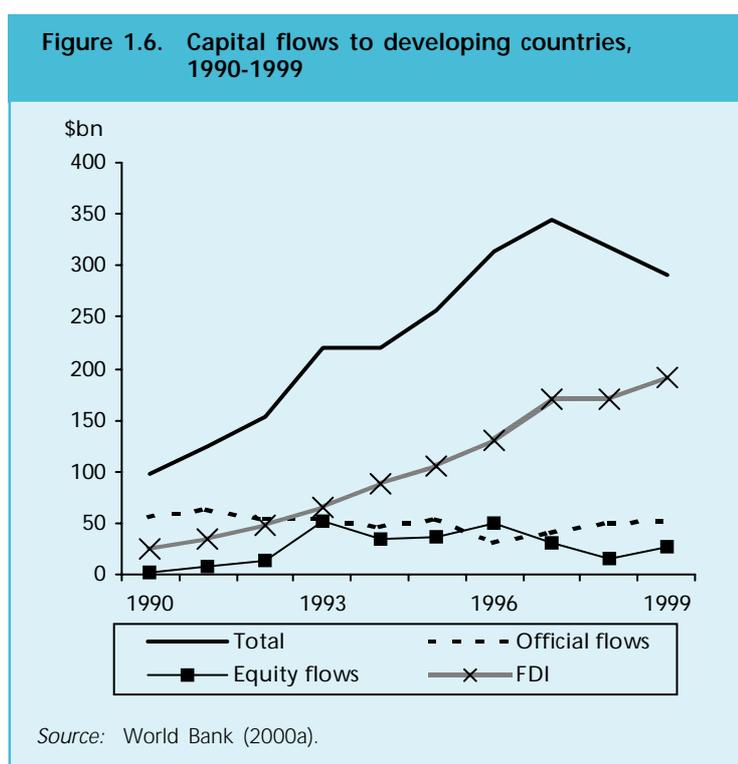
Figure 1.5. Share of public flows, equity flows and FDI in total capital flows to developing countries, 1990-1999



Source: World Bank (2000a).

countries rose from 24 per cent in 1990 to 66 per cent in 1999. Conversely the share of official flows fell sharply from nearly 60 per cent to under 20 per cent, and that of portfolio flows, after rising briefly during the first half of the decade, fell to less than 10 per cent by the turn of the millennium.

In absolute terms, the value of official flows showed little change over the decade, and equity flows were volatile, falling particularly after the 1997 crisis. On the other hand, flows of FDI rose steadily and sharply throughout the decade as shown in figure 1.6, from \$24 billion in 1990 to almost \$200 billion in 1999. This was particularly relevant from the point of view of SME development, as it is through the mechanism of FDI that SME participation in global markets is most significantly influenced.



Notwithstanding the more than threefold increase in FDI flows to developing countries over the decade, the share of the developing world in the global distribution of FDI remained relatively stable. Despite some variations over the decade, there was little change in the overall trend of the share of FDI going to developing countries as a whole. This ranged between 30 per cent and 40 per cent of total flows, as indicated in figure 1.7.

Within the developing world, Latin America's share rose and Asia's fell, especially in the latter half of the decade after the financial crisis of 1997 triggered a loss of confidence in the Asian region. FDI flows to Africa and Central and Eastern Europe were paltry.

Not all developing countries gained equally from the FDI flows, however. By the end of the decade, the largest 11 recipients of FDI accounted for two-thirds of the total, with China being the dominant recipient.

Figure 1.7. Share of FDI by major groups of countries, 1993-1999

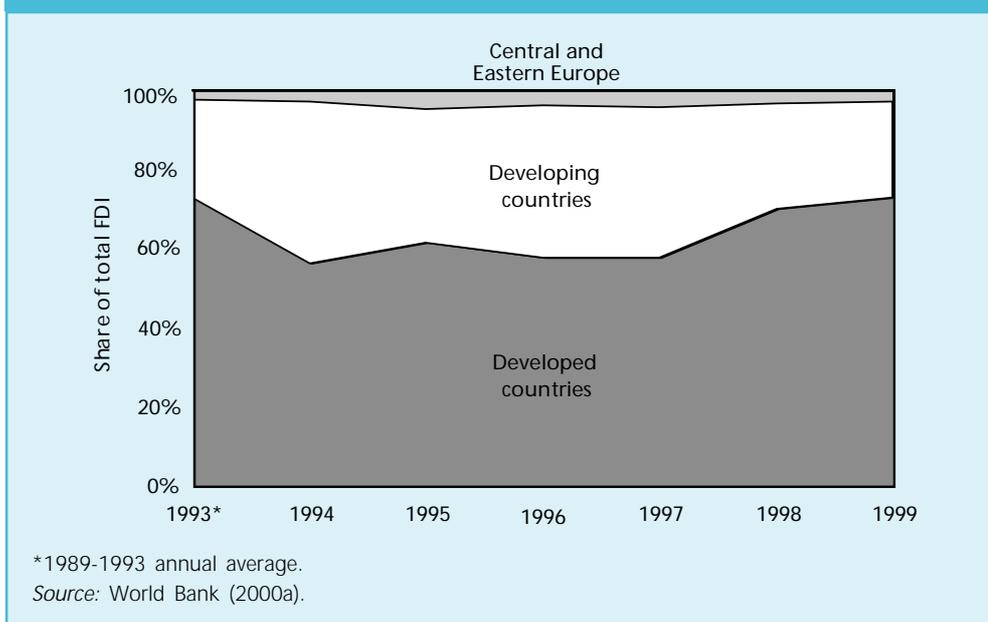
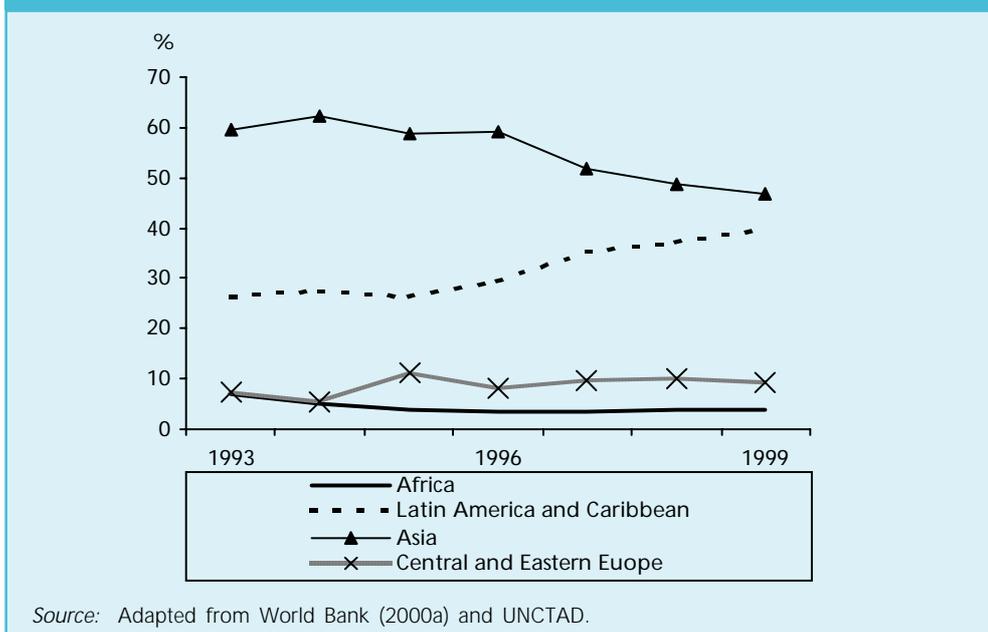


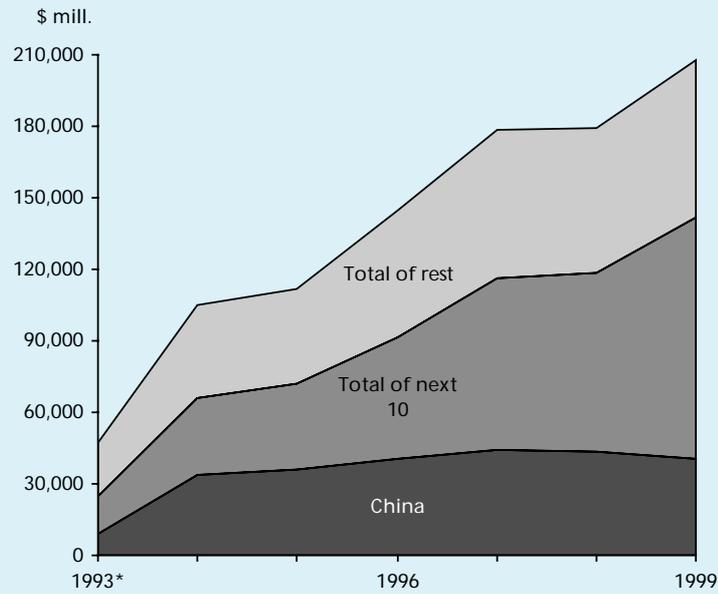
Figure 1.8. Destination of major FDI flows to developing countries, 1993-1999



As shown in table 1.5, China regularly accounted for between one-fifth and one-third of all FDI going to the developing world during the 1990s. After China, six of the next ten largest recipients were in Latin America, and the remaining four in East Asia.

The role played by FDI as a proportion of gross fixed capital investment varied, both over time and geographically. Thus, the share of FDI in total fixed capital formation grew significantly between the 1980s and 1990s, particularly in the transition economies, Latin America and East Asia. Proportionately, FDI played a smaller role in the Middle East and North Africa, South Asia and sub-Saharan Africa.

Figure 1.9. Share of FDI to developing countries, 1993-1999



*1989-1993 annual average.

Source: Adapted from World Bank (2000a) and UNCTAD (2000b).

Table 1.5. Share of FDI to developing countries, 1993-1999 (percentage)

	1993*	1994	1995	1996	1997	1998	1999
China	19	32	32	28	25	24	19
Brazil	3	2	5	7	10	16	15
Argentina	5	3	5	4	5	4	11
Thailand	9	3	5	4	6	12	9
Mexico	8	10	9	6	7	6	5
Rep. of Korea	2	1	1	2	2	3	5
Chile	2	3	3	3	3	3	4
Venezuela	3	2	2	4	9	7	4
Malaysia	7	4	5	5	4	2	2
Peru	0	3	2	2	1	1	1
Colombia	1	1	1	2	3	2	1
Total of next 10 after China	34	31	33	35	40	42	49
Total of rest	47	37	35	37	35	34	32

*1989-1993 annual average.

Source: Adapted from World Bank (2000a) and UNCTAD (2000b).

But not all FDI went into the creation of new productive activity. A significant share went on mergers and acquisitions (M&As), the takeover of existing enterprises in developing countries. Investment in M&As rose throughout the first two-thirds of the decade, reflecting the growing tendency for governments to privatize State-owned enterprises. By the latter part of the decade, the share of M&As began to taper off.

Figure 1.10. Share of FDI in total gross domestic capital investment, 1985 and 1995 (percentage)

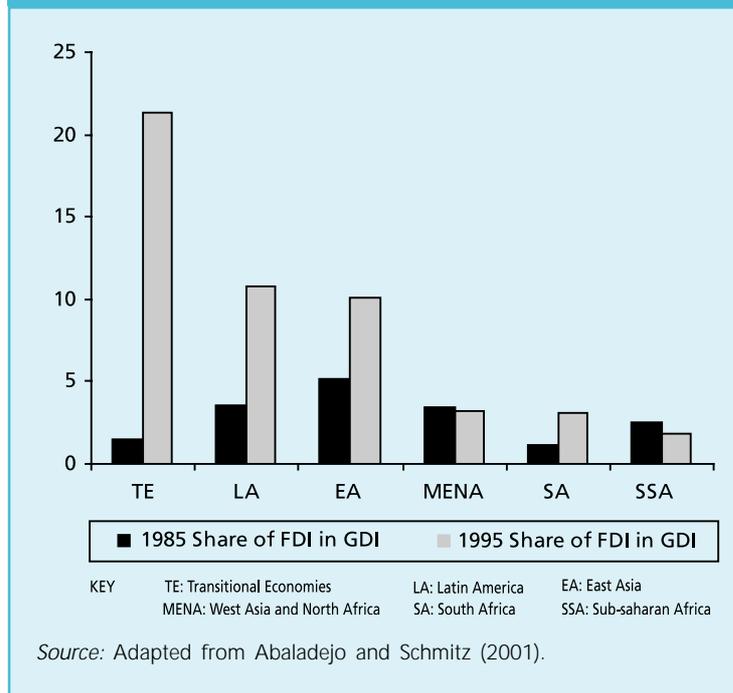
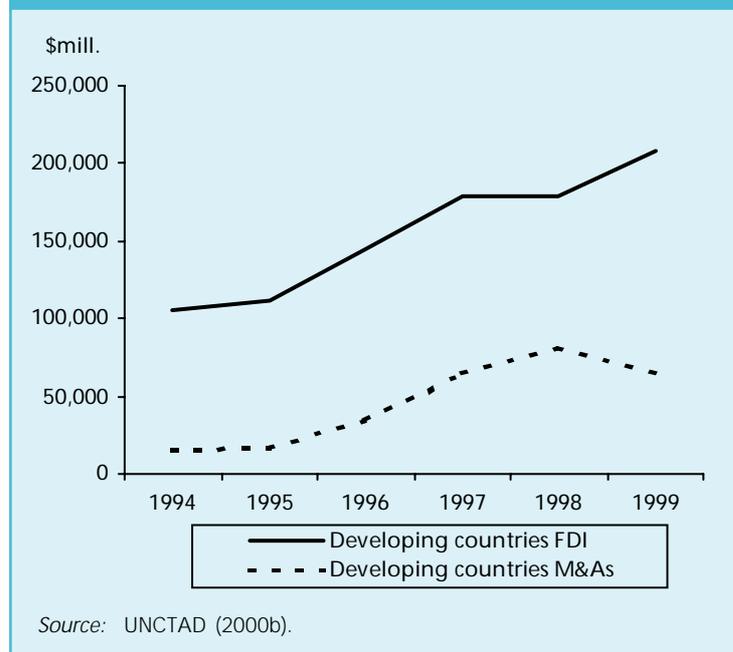


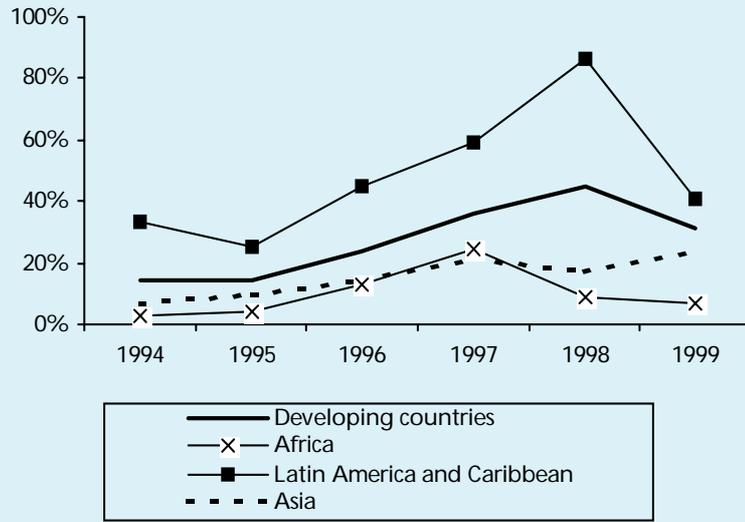
Figure 1.11. FDI and M&A sales in all developing countries, 1994-1999



At the same time, however, the role of M&A activity was not evenly distributed through the developing world. It was proportionately more important in Latin America. Most capital inflows in Africa and Asia predominantly went into Greenfield sites.³

³The relationship between FDI and M&A is not exact as measurement definitions differ.

Figure 1.12. Mergers and acquisitions as a share of FDI, 1994-1999



Source: Adapted from UNCTAD (2000b).

PART TWO

2. WINNERS AND LOSERS: MAKING THE BEST OF GLOBALIZATION

The debate on globalization is polarized between two views—globalization is good for the poor or globalization is harmful for the poor. This is much too simplistic a perspective, since it is less a matter of globalization being intrinsically good or bad, than how producers and countries insert themselves in the global economy. Understanding why this is the case—both understanding the dynamics (positive analysis) and then fashioning an appropriate policy response (normative analysis)—requires a detour in the discussion, beginning with a historical perspective on globalization and then identifying the dangers arising from a harmful pattern of insertion into the global economy.

2.1. Globalization in historical context

The decades after the Second World War were a period of unparalleled growth for most of the global economy. The richer countries engaged in a concerted period of post-war reconstruction, and the developing world engaged in a process of rapid catch-up. In historical terms, this was a period of unprecedented economic growth, referred to by historians as “the Golden Age” (Maddison, 1995). In both worlds the target was accumulation and capacity expansion—producers were in general able to sell whatever they produced into supply-constrained markets. This was particularly the case in the developing world, where in virtually all cases high barriers against imports facilitated economic growth—import-substituting industrialization was the norm. In most cases competitive pressures were low, particularly in poor countries where the growing scale economies in mass production were pitched in the context of small markets (Merhav, 1969): although populations were large, purchasing power was limited.

Over the next three decades, the “rules of the game” changed dramatically, especially for poor countries. Beginning with the reorientation of the “East Asian tigers”—Hong Kong, Republic of Korea, Singapore and Taiwan Province of China—in the late 1960s, a growing number of developing country producers began to target external markets, aided by incentives provided by their governments. Simultaneously, as capacity built up in the rich countries, so competitive pressures increased, and a growing number of TNC producers and buyers began to search actively (and often simultaneously) for larger markets in which to realize the scale economies in production and product development, and for lower cost production sites in the developing world. Responding to these pressures, the international environment of trade policy began to change. Successive rounds of international trade agreements meant that import barriers were systematically reduced in the rich countries.

Much of the developing world remained outside of this growing international specialization until after the mid-1980s. Then, due to a combination of factors—domestic pressures to emulate the success of the Asian tigers and external pressure to open up protected markets—trade liberalization became increasingly widespread. The result was a process of increasing integration and globalization. This was pervasive and reflected declining barriers to the global flow of information, ideas, factors (especially capital and skilled labour), technology and goods. This process of inter-country integration was not unique—in many respects integration at the end of the nineteenth century was more advanced than that which prevailed during the mid-1990s (Bairoch and Kozul-Wright, 1996).

But the internationalization of the late nineteenth was qualitatively different from that of the late twentieth century. The key difference is that in the earlier period this trade was largely in arms-length relationships, with final products being manufactured in a particular country and then exported. By contrast, in the latter period, trade was increasingly in sub-components and services, and was consequently considerably more complex (Feenstra, 1998; Hummels, Ishii and Yi, 1999). This directly reflected the drive by firms to identify and specialize in their core competences, and to outsource other activities. International specialization was much more complicated and tended to be in sub-processes—components (for example, TV tubes) and sub-components (for example, the bonding of semiconductors which had already gone through different sub-processes in a variety of countries; even by the early 1980s, the Apple personal computers were calculated to have “travelled” more than two million miles before they reached the final consumer). It has also led to the rise of key “governing” firms, coordinating systemic competitiveness in global value chains.

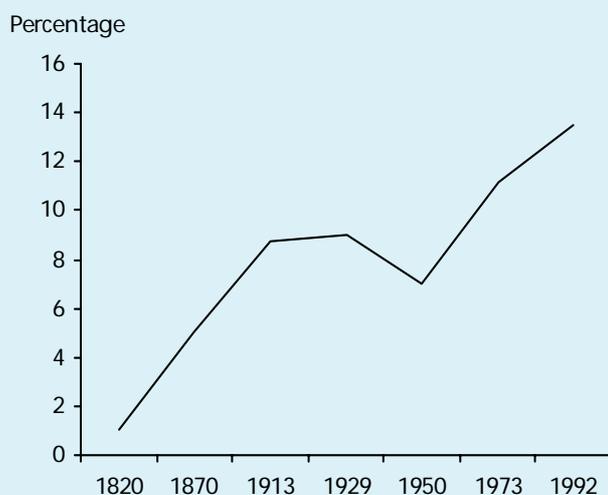
2.2. The march of globalization

Globalization can be seen as the pervasive decline in barriers to the global flow of information, ideas, factors (especially capital and skilled labour), technology and goods. It is clear that it has many dimensions. It is also complex, since the barriers to global interchange in the various spheres of human intercourse are changing at a varying pace, and often have regional dimensions (for example, integration within Europe is now occurring at a more rapid pace than integration between Europe and Africa). One important indicator of globalization—often used to the exclusion of all others—is in regard to international integration through trade. As we can see from figure 2.1, the ratio of global exports to global GDP has grown steadily and significantly since the early 19th century, although (and this is an important caveat) the trend dipped sharply downwards in the 1930s, after which it took three decades to reach previous levels.

The extent of the integration of different economies into global product markets varies, and is affected by a number of factors (most notably the size of the economy). What is especially striking, and of growing significance for developing country exporters, is the growth in export/GDP ratios of low-income countries in recent decades, particularly China and India (table 2.1).⁴

⁴These are widely chronicled events. But see Baldwin and Martin (1999) for a recent review of this evidence and a helpful comparison with levels of integration during the late nineteenth century.

Figure 2.1. Ratio of world merchandise exports to global GDP, 1820-1992
(Constant 1990 US dollars)



Source: Maddison (1995).

Table 2.1. Trade as a proportion of GDP, 1960-1995

Region	1960	1970	1980	1985	1990	1995	1997	1998
East Asia and Pacific	18.5	23.6	45.1	44.3	52.0	63.5	65.5	74.8
Europe and Central Asia	0.0	0.0	0.0	0.0	46.7	63.5	64.9	70.8
Latin America and Caribbean	21.3	19.7	26.6	26.6	25.9	31.0	32.2	32.4
Middle East and North Africa	0.0	0.0	73.9	56.0	67.1	62.9	60.4	53.0
South Asia	0.0	11.8	20.9	18.8	21.9	28.9	29.1	28.8
Sub-Saharan Africa	50.8	47.3	62.9	54.5	52.8	59.9	60.2	59.3
Income category								
High income	24.9	28.9	40.2	39.4	38.3	41.2	43.8	
Upper middle income	24.0	27.5	41.4	38.9	39.9	46.2	49.6	51.7
Middle income	28.6	30.3	44.8	40.6	43.8	51.4	53.5	56.2
Lower middle income	0.0	0.0	0.0	0.0	51.9	62.0	61.6	65.1
Low income	14.2	12.1	25.0	26.7	33.4	44.5	42.6	45.8
Low income, exc.								
China and India	30.9	30.3	49.0	40.7	47.6	56.1	56.7	73.6
World	24.9	28.0	40.0	38.8	38.9	42.9	45.2	

Source: World Bank (2000b).

2.3. The benefits and drawbacks of globalization

A great many people in the world have gained from the growing openness in factor and product markets, in communications, in cultural interchanges and in travel. A growing proportion of the world's population has experienced significant improvements in living standards in recent years. By 1998 there were 670 million more people living above the "absolute poverty" line than in 1990—i.e. their incomes, measured in 1985 purchasing power parity consumption standards which take account of living costs in different countries, exceeded \$1 per day. This represents a major advance in human welfare, and a historically unprecedented pace and degree of improvement. East Asia was a major beneficiary, especially after the 1960s, and China and India after 1980. For

example, the Chinese economy grew at an annual rate of 10.2 per cent during the 1980s and at 12.8 per cent during the first half of the 1990s. The benefits of this growth also filtered down to a large number of people. For example, the number of Chinese living in absolute poverty declined by more than 80 million between 1987 and 1998.

The gains of globalization have not been equally distributed, however. While the forces that continue to propel increasing economic openness testify to the extent of the gains it has generated, as well as the economic and political power of its beneficiaries, there have also been a large number of casualties in both the industrially advanced and developing economies. They include:

- ❑ Those who have been excluded from globalization;
- ❑ Those who have suffered from globalization; and
- ❑ Those who have gained, but remain poor.

Broadly speaking, the process of globalization has yielded the following drawbacks:⁵

- ❑ The number of people continuing to live in absolute levels of poverty, i.e. at below \$1 per day in 1985 purchasing parity prices, has remained stubbornly large at around 1.2 to 1.3 billion during the 1990s;
- ❑ The inter-country distribution of income has become considerably more unequal;
- ❑ The intra-country distribution of income has deteriorated in almost all countries, except where government transfers have ameliorated the growing divergence in factor incomes;
- ❑ The gap between skilled and unskilled labour incomes has grown for much of this period, as has that between senior management and their labour forces.

2.4. Making the best of globalization

These various developments pose serious problems for economic management, not just within governments, but also within firms and other institutions. The issue is one both of carrot and stick. The “carrot” is how to take advantage of the gains which arise from the reduction in global barriers which have allowed many individual firms and countries to specialize, to grow and to profit from globalization. The “stick” is the pressure coming from multilateral agencies (such as the WTO, the IMF and the World Bank) and bilateral aid donors, which are forcing recalcitrant countries to insert themselves more deeply into the global economy.

Thus, the key policy issue is not whether to participate in global markets, but how to do so in a way that provides for sustainable income growth. This, as we have seen, is a particular problem for poor producers and poor countries who seem to have experienced more of the downside than the upside of globalization over the past two decades. It is also a particular problem for SMEs, many of whom lack the capabilities to participate effectively in global markets.

How is it that producers can expand their presence in global markets but be worse off? The problem confronting firms and countries is that if they continue to specialize in highly competitive markets, then they will be increasingly subject to the erosion of their returns due to falling terms of trade. This is a spectre which has long confronted

⁵For more details on these unequalizing trends see www.ids.ac.uk/ids/global

producers of commodities and agricultural products, but it is increasingly also to be found in the export of manufactures.

Individual firms can get it wrong. Consider, for example, the case of a firm “manufacturing” denim jeans in an export-processing zone in the Dominican Republic during the early 1990s as presented in table 2.2. It saw its core competence as lying in the sewing of materials imported from the United States, designed in the United States and cut in the United States, and then selling them under the brand name of a major international company. Even the logistics of this operation were controlled by the US principal. The local firm, working under contract, began by getting \$2.18 per pair of jeans sewn. Then as neighbouring countries devalued (reducing the cost of their labour in US dollars), so the firm in the Dominican Republic was forced to systematically reduce its charge-rate; but even this was not enough and the work was eventually sourced elsewhere. The vulnerability of this firm, therefore, was that it specialized in a narrow function (sewing) within a particular link (production) in the value chain. Its value added was too low to allow for enhanced efficiency, and most of the value was in any case appropriated in the design and branding links of this chain.

Table 2.2. Declining unit prices and investment instability: The case of jeans manufacturing in the Dominican Republic, 1990-1991

	<i>Volume (per week)</i>	<i>Unit price (US\$)</i>
January 1990	9,000	2.18
October 1990	5,000	2.05
December 1990	3,000	1.87
February 1991	Arrangement terminated and assembly transferred to Honduras	

Source: Kaplinsky (1993).
Note: The total investment in equipment by the Dominican Republic firm was US\$150,000.

It is not just firms which can insert themselves inappropriately into global value chains. The same can also be true for whole sectors and regions. Consider for example the experience of a clustered group of leather shoe manufacturers in the Sinos Valley in Brazil (box 2.1). Here, the problem confronted by the shoe producing sector and region as a whole was very similar to that experienced by the single firm in the Dominican Republic, notably that they had specialized in those particular links in the value chain (leather and shoe production) which were subject to intense competition. The design and branding links remained in the United States.

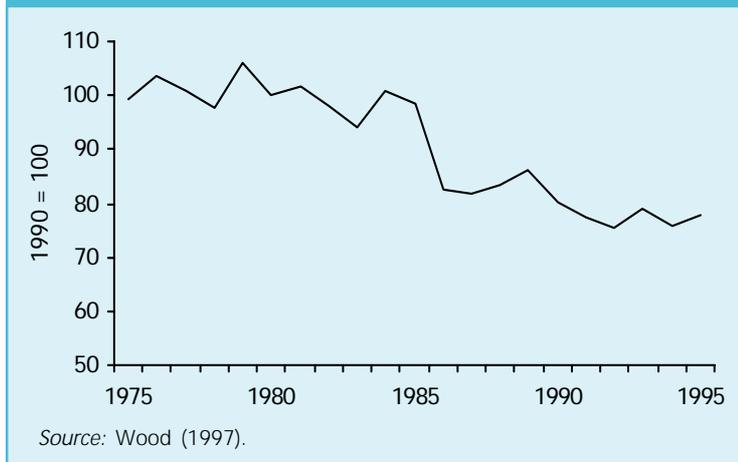
Box 2.1. Shoe production in the Sinos Valley, Brazil

Over a period of two decades, shoe producers in the Sinos Valley in Brazil established themselves as a major supplier of women’s shoes, particularly to the US, accounting for about 12% of total global exports. Initially, sales and exports grew rapidly during the 1970s, and although real wages did not grow significantly, they certainly did not fall. The connection to the US market was provided by a limited number of large-scale buyers who supplied very large US chain-stores. But once these buyers had established reliable, quality suppliers in Brazil, they moved their supply-chain management capabilities to China, building competitive capabilities and undercutting the very Brazilian producers which they had helped to upgrade during the 1970s! The consequence was a 40 per cent fall in wages in the Sinos Valley’s shoe sector during the 1980s.

Source: Schmitz (1995) and Schmitz and Knorringa (2000).

Finally, whole groups of countries can also insert themselves inappropriately into global markets. Historically, countries specializing in primary commodities (minerals and agriculture) have seen their terms of trade decline against manufacturers, and this has been one of the primary reasons underlying the drive towards industrialization. However, as can be seen from figure 2.2, and particularly since China's entry into global markets in the mid-1980s, we have begun to witness a historically significant decline in the terms of trade of developing countries' manufactured exports. Thus, even manufacturing is no longer a safe domain—countries specializing in labour-intensive manufactured exports are equally vulnerable to inappropriate insertion into global markets.

Figure 2.2. Price of LDC manufactured exports relative to IAC manufactured exports of machinery, transport equipment and services, 1975-1995



In summary, the consequence of the failure of individual firms, groups of firms and national economies to insert themselves appropriately into global markets is that the spectre is raised of *'immiserizing growth'*. This describes a situation where there is increasing economic activity (more output and more employment) but falling economic returns.

Box 2.2. Immiserizing growth

Immiserizing growth is defined as an outcome when overall economic activity increases, but the returns to this economic activity fall. For example:

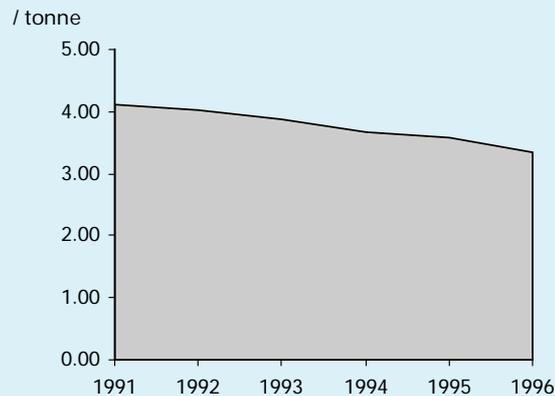
- ❑ If export prices fall faster than export volumes increase, the firm and or the country may be worse off even though economic activity is increased. This has happened to five countries exporting wooden furniture to the EU in the decade 1987-1996 (Kaplinsky and Readman, 2000).
- ❑ Increased exports can only be paid for by lower wages; in Brazil's shoe exporting sector, between 1970 and 1980 average real wages were stagnant, and during the 1990s they fell by approximately 40 per cent in real terms (Schmitz, 1995).
- ❑ If producers can only remain competitive through continual devaluation of the currency; this reduces the international purchasing power of domestic incomes.

An example of this process of immiserizing growth in operation is presented in box 2.3 with reference to the wooden furniture industry. It shows clearly how the price-pressure even on exports of manufactured products is becoming intense, leading to a significant deterioration of the terms of trade.

Box 2.3. Immiserizing growth in the wooden furniture sector

Falling global prices in the wooden furniture sector lead to immiserizing growth when producers are unable to upgrade. Growing competition in the wooden furniture sector is having a major impact on the wooden furniture industry. At an aggregate level, global prices are falling, as can be seen in the case of EU imports during the 1990s.

Unit price of EU imports of wooden dining room furniture, 1990-1997



Source: Kaplinsky and Readman (2000).

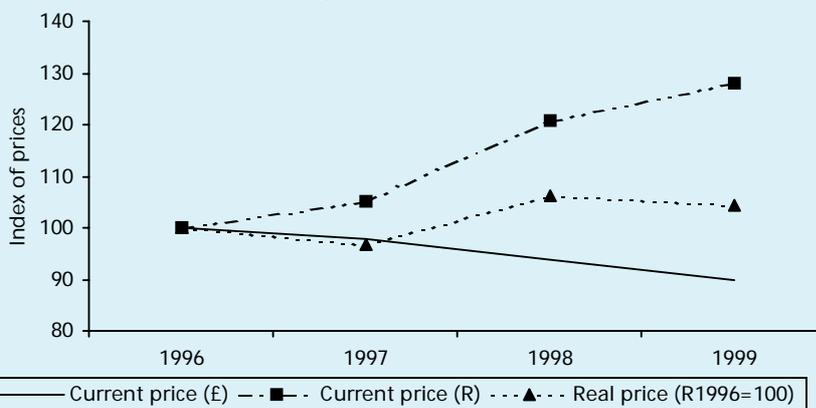
For some developing country producers who are locked into the commodity segments of this market (pine dining room furniture), the fall in prices can be very significant. For example, the Sterling prices of bunk beds and kitchen furniture received by two South African exporters fell between 1996 and 2000 by up to one-third:

Prices received by South African exporters of bunk beds, 1996-2000
(In pounds Sterling)

	1996	1999	2000
Exporter 1	74		48
Exporter 2	69	52	

These falling prices were not limited to bunk beds, but were also experienced by exporters of kitchen doors. As can be seen, the only factor saving this manufacturer of doors was the falling exchange rate, which devalued by more than the rate of inflation in this sector. Although this may have saved the wooden furniture manufacturer, the upshot of devaluation for the economy as a whole is a fall in the international purchasing power of domestic value added, a form of immiserizing growth.

Prices received by manufacturer: Wooden doors



3. THE UPGRADING CHALLENGE

3.1. Innovation and upgrading

The key issue arising from the analysis in chapter 2 is *how* producers—whether firms, regions or countries—should participate in the global economy rather than *whether* they should do so. It is possible to distinguish two paths of insertion into the global economy. The low road is one of immiserizing growth, a trajectory in which producers face intense competition and are engaged in a “race to the bottom”. By contrast, those who tread a high road, and exhibit the ability to enter a virtuous circle of participation in the global economy, realize sustained income growth.

What explains the difference between these two paths? A key capability is the capacity to innovate, and to ensure continuous improvement in product and process development. If this is the case, then the emphasis in production therefore needs to be placed on the ability to learn and this has implications not just for the productive sector itself, but also for the whole national system of innovation (Lundvall, 1992; Nelson, 1993). But innovation in itself may not be sufficient. If the rate of innovation is lower than that of competitors, this may result in declining value added and market shares; in the extreme case it may also involve immiserizing growth. Thus innovation has to be placed in a relative context—how fast compared to competitors—and this is a process which can be referred to as one of upgrading.

3.2. Upgrading core competences and dynamic capabilities

But how would we know if firms have managed to innovate, or to upgrade their activities? Two schools of thought have addressed this issue in recent years. The first has focused on core competences (Hamel and Prahalad, 1994). The thinking here is that firms need to examine their capabilities to identify those of their attributes which:

- Provide value to the final customer;
- Are relatively unique in the sense that few competitors possess them; and
- Are difficult to copy, i.e. where there are barriers to entry.

The capacity to innovate therefore arises from concentration in these competences and the outsourcing of those functions which do not meet these three criteria. A useful corollary to this line of thinking is that in a dynamic world, core competences can easily become corerigidities (Leonard-Barton, 1995), and part of the task of upgrading is to relinquish areas of past expertise.

Closely related to this view is a school of thought focusing on dynamic capabilities (Teece and Pisano, 1994). It argues that corporate profitability in the long run cannot be sustained by control over the market (for example, through the adoption of quasi-monopolistic practices), but through the development of dynamic capabilities which arise as a result of the firm's:

- ❑ *Internal processes* which facilitate learning, including the capacity to reconfigure what the firm has done in the past;
- ❑ *Position*, that is its access to specific competences either within its own activities, or those which are drawn from the regional or national system of innovation; and
- ❑ *Path*, that is, its trajectory, because change is always path-dependent.

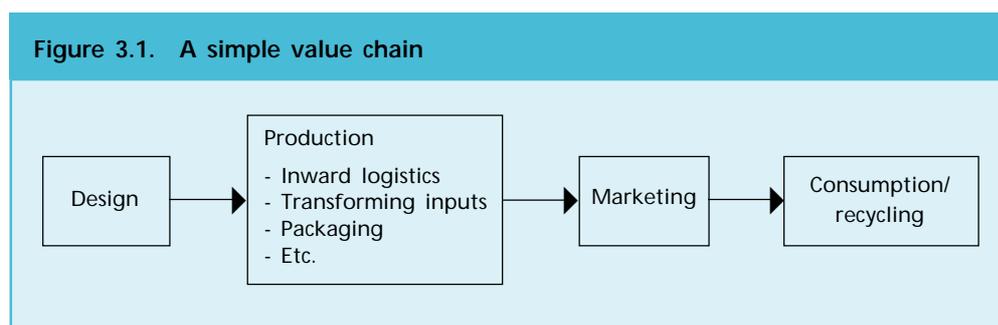
Both of these related concepts provide an important backdrop for understanding the phenomenon of upgrading. They are especially helpful in understanding the factors which both drive and facilitate improvements in product and processes which arise from the activities of the firm itself. They suffer from the weakness of focusing exclusively at the level of the firm, however, and therefore fail to capture upgrading processes which are systemic in nature and which involve groups of firms linked together.

In order to understand how these systemic forces affect upgrading, it is necessary to enter into a brief discussion of the concept of the value chain, which has assumed increasing importance in recent years in the formulation of corporate and national upgrading strategies.

3.3. What are value chains?

The *value chain* describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. Considered in its most elementary form, it takes the shape as described in figure 3.1. As can be seen from this, production per se is only one of a number of value added links. Moreover, there are ranges of activities within each link of the chain (of which only those for production are detailed in figure 3.1).

In the real world, of course, value chains are much more complex than the schematic illustration in figure 3.1. For one thing, there tend to be many more links in the chain. Take, for example, the case of the furniture industry. This involves the provision of seed inputs, chemicals, equipment and water for the forestry sector. Cut logs pass to the sawmill sector, which gets its primary inputs from the machinery sector. From there, sawn timber moves to the furniture manufacturers who, in turn, obtain inputs from the machinery, adhesives and paint industries and also draw on



design and branding skills from the service sector. Depending on which market is served, the furniture then passes through various intermediary stages until it reaches the final customer, who after use consigns the furniture for recycling.

In addition to the manifold links in a value chain, typically intermediary producers in a particular value chain may feed into a number of different value chains. In some cases, these alternative value chains may absorb only a small share of their output; in other cases, there may be an equal spread of customers. But the share of sales at a particular point in time may not capture the full story—the dynamics of a particular market or technology may mean that a relatively small (or large) customer/supplier may become a relatively large (small) customer/supplier in the future.

3.4. Why are value chains important in the understanding of upgrading strategies?

One of the primary features of recent decades of globalization is that as more and more countries have developed their capabilities in industrial activities, so barriers to entry in production have fallen and the competitive pressures have heightened. This has become particularly apparent since China, with its abundant supplies of educated labour, entered the world market in the mid-1980s.⁶ It is this phenomenon which also underlies the falling terms of trade in manufactures of developing countries illustrated in figure 2.2 above.

Consequently, it is increasingly the case that the primary economic returns in the chain of production are to be found in areas outside of production, such as design, branding and marketing. Value chain analysis provides not just a method of understanding these developments, but also a way of identifying key challenges in the promotion of upgrading.

Returning to the traditional treatment of upgrading in the core competences and dynamic capabilities literature, it was noted above that both of these related concepts provide an important backdrop for understanding the phenomenon of upgrading, and in particular the factors which drive and facilitate improvements in product and processes arising from the activities of the firm itself. It was also noted, however, that they suffer from the weakness of being limited to the level of the firm, and thus fail to capture upgrading processes of a systemic nature and involving groups of firms linked together in value chains. This is particularly damaging in the case of the core competences approach, which explicitly neglects the chain through its normative conclusion that upgrading means outsourcing.

Consequently, we need to view the upgrading challenge in a wider perspective, capturing the central idea that it may involve changes in the nature and mix of activities, both within each link in the chain, and in the distribution of intra-chain activities. This relates both to the achievement of new product and process development, and in the functional reconfiguration of who does what in the chain as a whole. It is thus possible to identify four trajectories that firms can adopt in pursuing the objective of upgrading, namely:

- Process upgrading;
- Product upgrading;
- Functional upgrading; and
- Chain upgrading.

⁶The share of manufactures in total exports rose from 49.4 in 1985 to 85.6 per cent in 1995 (Khan, 1999).

These are described in greater detail in box 3.1.

The first two of these are readily understood. What the value chain perspective offers here is the recognition that process and product upgrading increasingly involve integrated actions between firms in the chain. Functional upgrading is a little more complex, since it involves firms engaging in a different mix of activities, both within their individual link and perhaps by also moving to other links in the value chain, as shown in figure 3.1. Most commonly, in the contemporary global economy, upgrading implies the shift from control over embodied to control over disembodied activities (for example, from production to design). Finally, in some cases, barriers to entry in a particular chain may be so low that there are few prospects of upgrading. In this case, upgrading may imply the capacity to move to new chains.

Box 3.1. The value chain framework: Four categories of upgrading

- ❑ *Process upgrading*: Increasing the efficiency of internal processes in such a manner as to ensure that they are significantly better than those of rivals, both within individual links in the chain (for example, increased inventory turns, lower scrap), and between the links in the chain (for example, more frequent, smaller and on-time deliveries).
- ❑ *Product upgrading*: Introducing new products or improving old products faster than rivals. This involves changing new product development processes both within individual links in the value chain and in the relationship between different links of the chain.
- ❑ *Functional upgrading*: increasing value-added by changing the mix of activities conducted within the firm (for example, taking responsibility for, or outsourcing, accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (for example from manufacturing to design).
- ❑ *Chain upgrading*: moving to a new value chain (for example, Taiwanese firms moved from the manufacture of transistor radios to calculators, to TVs, to computer monitors, to laptops and now to WAP phones).

3.5. The growing importance of standards in process upgrading

In recent years developments in the major importing countries have had a significant impact in forcing process standards on to the upgrading agenda, and this has particular implications for SMEs. The first challenge has arisen from the progressive dismantling of quota and tariff protection, initially in the industrially advanced economies in the post-war period, and subsequently in the developing world. Despite the sectoral unevenness of this process, trade policy reform has led to an overall decline in tariffs and quotas in virtually all countries and sectors. Yet, at the same time, the pressures towards protection have remained, as displaced owners and workers in the importing countries have sought to sustain their livelihoods. This has led to a growing trend towards the imposition of new forms of protection, but through the adoption of measures that do not violate GATT and WTO regulations.

The second parallel and complementary development has been the growth of popular movements targeting global producers and requiring them to adjust their operating processes to ensure that the corporate profitability is not the only factor which firms are targeting. This has led to demands for triple bottom line accounting,

in which firms are challenged to not only target a positive financial surplus, but to also aim to achieve minimum environmental and social objectives (Elkington, 1997).

Thirdly, arising out of the transformation of production organization in Japan in the post-war period, new forms of shop floor organization were developed which were designed to increase flexibility, to force down production costs, to increase quality and to enhance delivery reliability (Monden, 1983). These led to the development of standardized business processes such as just-in-time single unit flow procedures, total quality control, and continuous improvement practices. The mechanisms for activating these processes included the utilization of process-packages such as ISO quality and environmental standards (ISO 9000 and ISO 14000), and industry-specific standards such as Hazard Analysis and Critical Control Point (HACCP) processes in the food industry.

Finally, as TNCs have increasingly integrated their global production systems, so they have found it necessary to ensure compatibility between processes and procedures throughout their global chains. This essentially globalized the adoption of systems developed in the US in the nineteenth century.⁷ Producers operating in global value chains have therefore increasingly been required to employ certain operating procedures in order to facilitate multiple global sourcing arrangements for key components.

The outcome of these four developments has been a growing demand for standards, both in products and in processes. As shown in figure 3.2, these standards are legally codified in some cases; while in others they reflect an agreed set of procedures ratified by national organizations (such as Bureaux of Standards) and international organizations (such as the International Organization for Standardization, ISO). In addition, they often also reflect the internal standards of particular firms. The demand for standards comes both from final buyers (for example, the requirement of many apparel companies that clothing sold by them should be produced with adequate labour and environmental standards) and from TNCs controlling global production systems (for example, the auto assembly industry's requirements for ISO 9000 and QS 9000 processes from its component suppliers).

Producers integrated into global value chains are therefore increasingly having to meet the requirements of these standards, whether this is in the furniture industry (box 3.2) or the footwear industry (box 3.3). The issue is whether this has a dispro-

⁷The "American System of Manufacture" was developed to ensure the consistency of components and was a necessary prelude to the development of mass production in the twentieth century (Hounshell, 1984).

Figure 3.2. Different types of standards

		<i>Type of codification</i>			
		<i>Legal codification</i>	<i>Internationally agreed</i>	<i>Regionally specific</i>	<i>Firm specific</i>
<i>Type of standard</i>	<i>Product</i>	Food hygiene standards; lead content in toys	G3 standards for cellular phones	"Homogolization" of regulations on product types (e.g. for automobiles in the EU)	Firm standards supporting brand name
	<i>Process</i>	Health and safety standards in work	ISO 9000 (quality) SA 8000 (labour)	QS 9000 (quality in autos, originating in the US), BS 5750 (quality standards originating in the UK)	VDA6.1 (VW quality standard)

Source: Kaplinsky and Morris (2001).

portionate impact on SMEs. The problem for small firms is that the fixed costs of auditing the compliance of these requirements for participation in global value chains can be high, and is thus scale intensive. There are two reasons for these high costs. The first is that the auditing procedure (which producing firms are generally required to pay for themselves) can often exceed \$5,000 a time, irrespective of firm size. The smaller the firm, the greater is therefore the proportionate burden. Secondly, there is a growing multiplicity of process standards—one Chinese firm reported being audited by teams from 40 customers in a single month, from a combination of buying firms, external audit firms, and NGOs.⁸

All of this has implications for upgrading. Standards, whether related to processes or products or both, are becoming an increasingly important qualifying requirement for participation in global product markets and global value chains. Moreover, this is a dynamic development, with new and enhanced standards being introduced continuously. The capacity to meet this changing agenda of standards is emerging as an increasingly important category of process upgrading.

⁸Data provided by Mil Niepold of Verite.

Box 3.2. The growing role of standards in the global furniture industry

The global wood furniture industry is increasingly becoming one in which independent suppliers sell to global buyers, and most TNCs have retreated from hierarchical control over their global production networks. To ensure that these suppliers meet both their quality standards and satisfy global consumers, the TNCs are increasingly requiring their suppliers to develop the capabilities to meet specified standards in their production processes.

A survey of buyers was undertaken in this industry, asking them to rank the importance of the following standards on a scale of 1 (not important) to 7 (most important):

- ISO 9000—a global quality standard
- ISO 14000—a global environmental standard
- FSC—a wood-specific environmental standard affecting the whole value chain
- SA 8000—a labour standard

The results are illustrated in the figure below.

The importance of international standards



Source: Kaplinsky, Morris and Readman (2001).

Box 3.3. Nike and international labour standards

Nike has sub-contracted work to factories in Central and South America since the early 1990s. Currently, the company has contracts with 25 factories in eight countries in this region. These contract factories employ more than 23,000 workers, roughly 70 per cent women and 30 per cent men.

The company introduced a Code of Conduct in the mid 1990s, which is applied to all collaborating partners. These standards include:

- The manufacturer does not use forced labour in any form.
- The manufacturer does not employ any person below the age of 18 to produce footwear or below the age of 16 to produce apparel, accessories or equipment.
- The manufacturer provides each employee with at least the statutory minimum wage, or the prevailing industry wage, whichever is higher.
- The manufacturer provides each employee all legally mandated benefits.
- The manufacturer complies with legally mandated work practices.
- Management of Environment, Safety and Health (MESH) codes are in place.
- The manufacturer maintains on file all documentation needed to demonstrate compliance with this Code of Conduct.

(Source: www.nike.com)

In addition to Nike's internal monitoring, PricewaterhouseCoopers also assess whether these contract factories are in compliance with local labour laws and Nike's Code of Conduct. A summary of their findings from 1999 and 2000 is presented below for all contractors in Central and South America, excluding Mexico.

Monitoring Categories	No. of Factories not Meeting Standards
Management Knowledge of Code	1
Management Knowledge of Laws	0
Respect for Workers Rights	2
Non-Discrimination in the Workplace	1
Forced Labour	1
Child Labour—Per Country's Law	1
Minimum Age—Per Nike Code	0
Total Compensation	4
Benefits	6
Hours of Work/Overtime	3
Health & Safety	12
Environment	1
Subcontracting	1
Documentation & Inspection	9

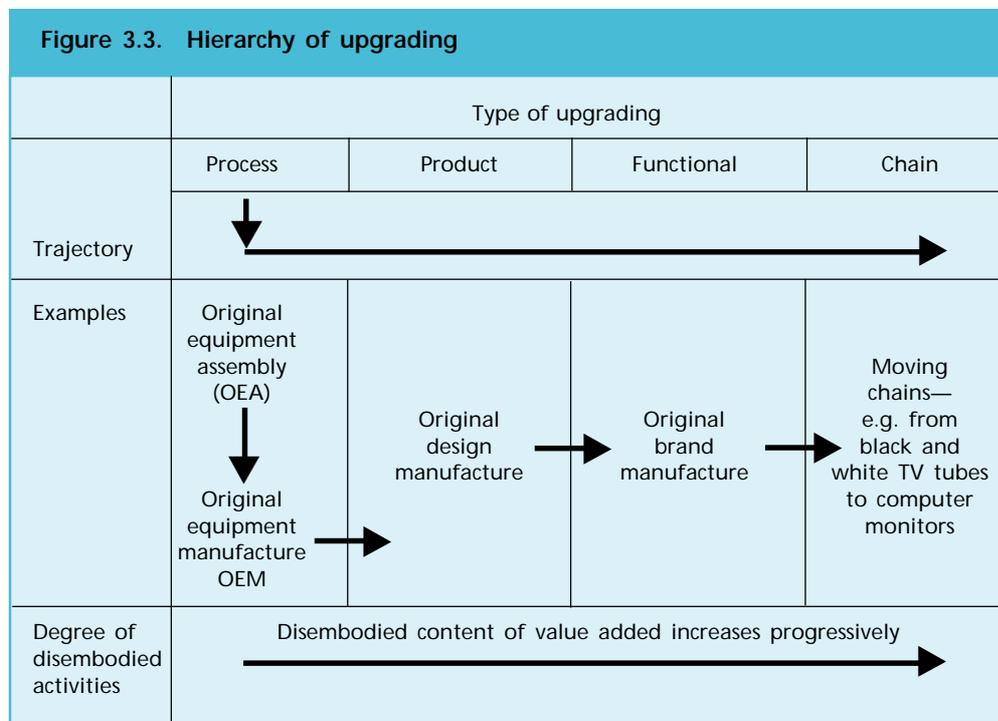
(n=22 factories) Source: www.nikebiz.com.

Of course, even with third party assessors, issues still arise. Labour unrest in a Mexican apparel factory in 2000 highlights the need for independent third party monitoring. The NGO Global Alliance has also pointed to labour unrest in Nike factories in Indonesia. This suggests that upgrading working conditions in global supply chains requires significant resources and managerial diligence (www.theglobalalliance.org).

3.6. Is there a hierarchy of upgrading?

Is it possible to determine a hierarchy of upgrading? In other words, does international experience suggest that firms engaged in upgrading can proceed along a well-trodden path? And, if so, what particular lessons are there for SMEs in the pursuit of this growth trajectory?

Much of the literature posits such a trajectory (Gereffi 1999a, Lee and Chen 2000). It is one which begins with process upgrading, then moves to product upgrading, to functional upgrading and last of all, to chain upgrading as illustrated in figure 3.3. This accords with the common assertion that East Asian firms have made the transition from OEA production (original equipment assembling, i.e. thin value added assembling under contract to a global buyer) to OEM (original equipment manufacturer, i.e. manufacturing a product which will bear the buyer's badge), to ODM (own design manufacturer) to OBM (own brand manufacturing). Invariably this is a trajectory which involves a progressively higher content of disembodied, knowledge-intensive activities.



If this hierarchy prevails, it has important implications for SMEs. This is for two reasons. First, the barriers to entry which define the envelope of profitable production are declining most rapidly in the embodied links in the value chain (that is, in regard to process capabilities). These are the areas most subject to competition and hence to declining terms of trade. By contrast, it is the disembodied activities such as design, marketing, technology and strategic repositioning where rents are appreciating and which are most difficult to enter and which consequently offer the highest rates of return (Kaplinsky and Morris, 2001). The relative importance of disembodied inputs is, as a general rule, progressively more important as the challenge moves from process, to product, to functional to chain upgrading. Hence, to sustain income growth SMEs—either individually or collectively— will in the long run need to develop the capability to upgrade not just processes and products, but increasingly also their functions.

Secondly, the types of scale economies which arise in the value chain tend to differ with the degree of disembodied inputs employed in production (Kaplinsky, 1990). Where embodied inputs predominate, the major scale economies arise in production itself. On the other hand, disembodied scale economies involve significant inputs of knowledge and these need not be firm- and/or location-specific. Hence, insofar as scale economies require SMEs to cooperate with each other to achieve what has been referred to as “collective efficiency” (Schmitz, 1995), the nature of this collaboration will tend to differ. At the early phase of the upgrading trajectory—where process upgrading is critical—the primary arena for cooperation is in production sharing or a division of labour in the production cycle (for example, firms making complementary products or components for each other). But, as the upgrading frontier moves towards increasingly disembodied activities, SMEs require the skills to manage and share knowledge, rather than to cooperate in production.

4. IS PRODUCTIVE EFFICIENCY ENOUGH TO ENSURE SUSTAINABLE INCOME GROWTH IN THE GLOBAL ECONOMY?

Production capabilities are diffusing increasingly widely through the global economy. More and more firms are mastering the capability to meet the standards of World Class Manufacturing (Schonberger, 1986). Therefore, whilst the capacity to upgrade may be a necessary condition for gainful incorporation in the global economy, it may not be sufficient. Other factors will determine *which* of these producers will be incorporated into global production networks. The same factors will determine the scope which individual producers, including SMEs, have for upgrading their activities.

In understanding these factors, as well as the implications which they will have for the capacities of SMEs to upgrade, it is important to identify the different modes in which producers are linked into final markets. This allows us to understand the distinct and changing roles played by FDI, by buyers and by industrial clusters in facilitating the insertion of SMEs into global product markets. From this it will then be possible (in part three) to identify practical steps which can be taken to promote the upgrading of SME producers.

4.1. Forms of incorporation in the global economy: Hierarchies, networks and markets

Value chain analysis identifies four major forms of incorporation of producers into the global economy (Humphrey and Schmitz, 2000):

- ❑ Arms-length trading relationships between producers and buyers, which are essentially impersonal in nature;
- ❑ Network relationships, between “equals”, i.e. firms holding complementary assets and selling into final markets;
- ❑ Quasi-hierarchical relationships, with a dominant governor coordinating global production and exchange, but with no or only weak equity links; and
- ❑ Hierarchical relationships involving close equity ties and FDI.

Each of these forms of incorporation therefore involves the participation of certain key actors, as shown in figure 4.1.

Figure 4.1. Forms of incorporation in the global economy and key intermediating agents

Forms of incorporation of producers into global markets	Main Actors
<p>1. Arms-length relationships describe a world where producers and customers are faceless to each other. They operate in a world of transient and impersonal relationships, much as that described in economic textbooks on perfect competition. The export of many primary commodities (such as coffee) is an example of this form of incorporation in global markets.</p>	<p>Independent producers and buyers</p>
<p>2. Network relationships occur when different producers have complementary skills which they need to share in order to prosper. The defining aspect of these complementary skills is that they define a world of cooperation among “equals”, often engaging in technological collaboration (for example in the electronics industry, or in automobiles where major assemblers jointly produce engines)</p>	<p>Producers group together to penetrate global markets</p>
<p>3. Quasi-hierarchical relationships between buyers and producers describe a world in which the two parties are not joined by ownership, but engage in a long-term relationship. One of the parties tends to be dominant—to assume the role of “governor”—and to define who is incorporated in the chain, and what standards they have to meet.</p>	<p>Key firms “govern” global production:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Determining who is included in global chains; <input type="checkbox"/> Determining what standards they need to meet; <input type="checkbox"/> Assisting producers to meet these standards; and <input type="checkbox"/> Auditing the performance of producers
<p>4. Hierarchical relationships refer to the incorporation of producers in a vertically integrated production chain, connected by close bonds of ownership. It describes a value chain of head offices and subsidiaries, that is a world of foreign direct investment.</p>	<p>TNCs produce in vertically integrated global chains</p>

Source: Adapted from Humphrey and Schmitz (2000).

4.2. Arms-length relationships: The role of global buyers

One way in which producers connect to final markets is through specialized buyers, as shown in box 4.1. As can be seen from figure 4.2, it is seldom the case that individual producers sell directly to the customer (although there is an expectation that e-commerce may lead to important changes here). Almost always they will go through intermediaries. Moreover, markets in final consuming countries, particularly in high-income countries, are becoming increasingly concentrated.

The following major buyers can be identified:

- Final retailers;
- Independent specialized buyers in the country of consumption;

- ❑ Large international firms sourcing products from many countries, either as independent buyers or through their own global production networks (i.e. as TNC producers);
- ❑ Local buyers and export agents; and
- ❑ Large producing firms acquiring products and other inputs from other local suppliers.

**Box 4.1. Connecting producers to final consumers:
Different types of global buyers**

Producers seldom supply directly to final consumers. Their products characteristically pass through a number of intermediary buyers, and these determine the extent to which SMEs can upgrade their operations. The following major types of buyers can be identified:

In the consuming country:

- ❑ Multi-outlet retailers
- ❑ Single-outlet retailers
- ❑ Independent specialized buyers
- ❑ Large international firms with global production networks

In the producing country:

- ❑ Local buyers and export agents
- ❑ Large producing firms acquiring products and other inputs from other local suppliers

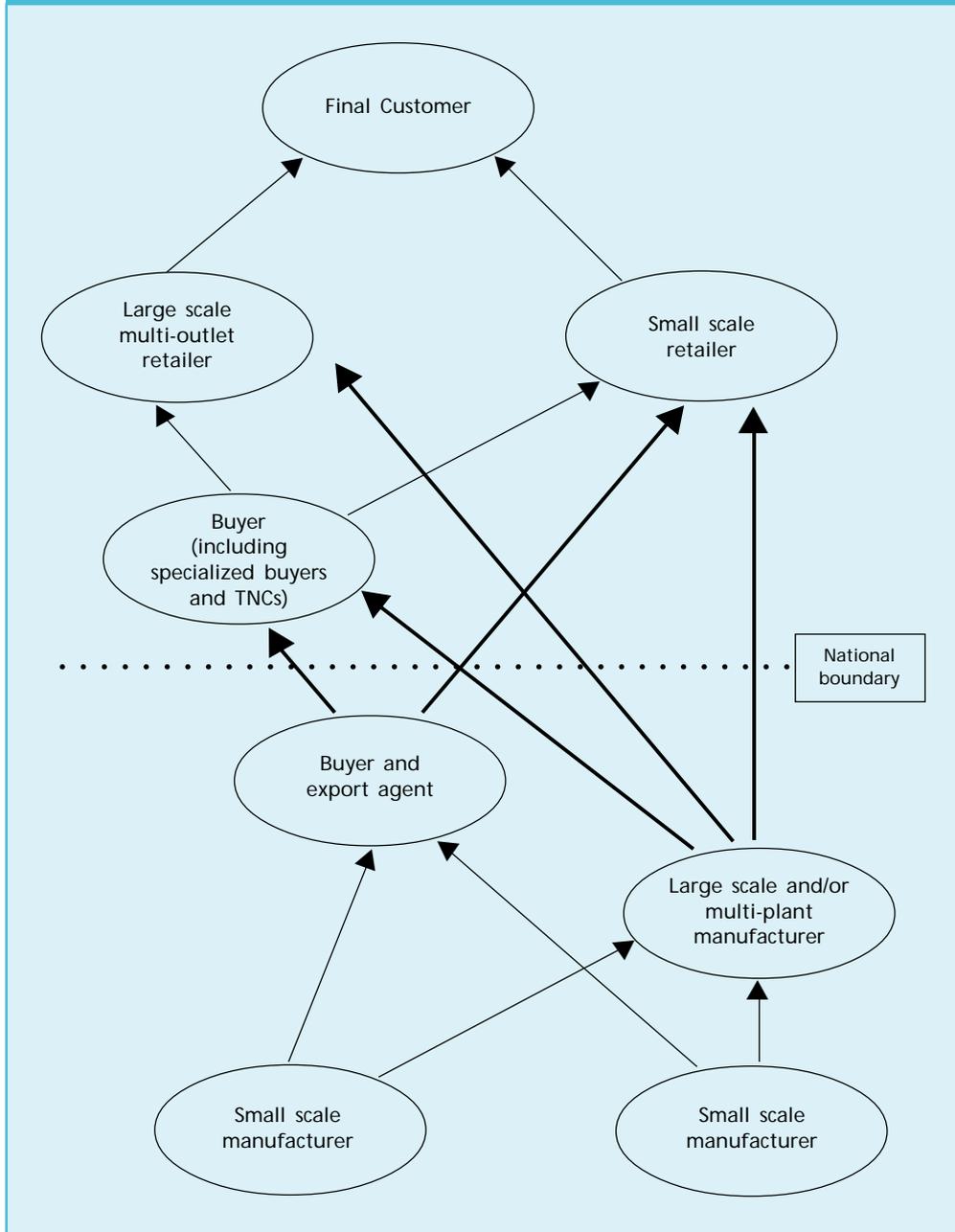
4.3. Networked insertion into global product markets: Dynamic SMEs and collective efficiency⁹

A second way in which producers can be linked to final markets is through networked relationships, involving cooperation between producers of approximately equal power. These networked relationships may be in a vertical value chain, or a horizontal network with other firms performing the same task. They may also be bilateral with a single other firm, or multilateral with more than one firm (Nadvi and Schmitz, 1999).

Although much of global trade is conducted through networks of large firms and their suppliers (and increasingly through TNC networks, with production undertaken by subsidiaries throughout the global economy), SMEs have not been entirely absent from the stage. There are a number of cases in which networks of small firms have become significant exporters, reflecting the vibrancy of industrial districts. The most well known of these networks are industrial districts in Italy and Spain, but there are also a growing number of success stories from developing countries (Nadvi and Schmitz, 1999). Moreover, a number of districts which are now dominated by large firms—notably Silicon Valley and the Hollywood film industry—began their lives as clusters of small firms.

⁹This discussion is informed by www.ids.ac.uk/global/coleff.html.

Figure 4.2. How producers connect to final markets



What lessons can be learned from this experience that might be of assistance to SMEs in developing countries seeking to participate gainfully in the global economy? The following main conclusions emerge from a review of their experience:

- ❑ SMEs can be categorized into those which are essentially survivalist and show little scope for dynamism (mostly micro enterprises), and those which are potentially dynamic.
- ❑ The problems of small firms are often directly related to their size. This makes it difficult for them to acquire inputs cheaply, to provide their labour force with the necessary skills, to gain access to the finance required to serve distant markets and expand their operations, to acquire technology (much of which is both costly

and scale-intensive), to influence government policy, and to serve large external markets.

- ❑ These disadvantages of small firms are often overcome when SMEs cluster together. At a minimum they gain from the *unintended consequences of proximity*. There may be a pool of skilled labour they can draw on; specialized suppliers might arrive to meet the needs of a number of producers; so might buyers, attracted by a multitude of small producers, none of which alone can satisfy their needs, but who collectively might do so; governments and service providers may provide infrastructure when the collective presence of many small firms creates a large scale demand; and so on. But the most successful districts thrive when these unintended benefits of proximity are complemented by *joint actions* to achieve *collective efficiency* as shown in box 4.2 (Schmitz, 1995).
- ❑ Cooperation between SMEs appears to be much easier when it involves vertical value chain links than when it requires cooperation between firms doing similar things; for example, shoe, leather and machinery firms cooperate much more readily than do shoe manufacturers alone.

Box 4.2. Collective efficiency

Groups of firms located in the same geographical space benefit from collective efficiency when:

1. Together they generate external economies which spill over in a beneficial way to other firms. For example, they may:
 - ❑ Generate a pool of skills;
 - ❑ Draw in infrastructure and specialized suppliers; and
 - ❑ Attract buyers.
2. They engage in joint actions. For example, they may:
 - ❑ Engage in joint purchasing;
 - ❑ Sell under a collective label; and
 - ❑ Provide a collective facility for customs clearance.

There are many examples of SME-based industrial districts in developing countries which have become effective participants in global markets by engaging in joint actions, as shown in boxes 4.3 and 4.4.

It is important to note that these industrial districts are dynamic. Not only do they often grow from SME-based clusters to large-firm districts, but the degree of joint action in which they engage may also vary over time. For example, Sinos Valley shoe exporters in Brazil cooperated effectively in the early stages of the district's growth, but when new competition arose from China, they proved less successful in promoting upgrading activities. An important element in this story—which we will return to in the discussion of policy in part three—is that the buyers achieved an alliance with leading large-scale firms (which grew out of SMEs) and deliberately inhibited cluster-wide cooperation. But, what happens when these clusters are confronted by crises? The answer is that when they engage in joint actions they are often able to overcome these threats to their existence, as described in box 4.5.

Box 4.3. The Sinos Valley shoe cluster

Between 1970 and 1990, a cluster of almost 2,000 firms in the Sinos Valley in Brazil raised its share of world leather footwear exports from 3% to 12%, specializing in women's shoes. By 1991 they had exported nearly 100 million pairs of shoes, worth almost \$900 million. These firms covered a range of links in the footwear chain, and created more than 15,000 jobs:

<i>Sub-sector</i>	<i>No. Firms</i>	<i>Direct Jobs</i>
Footwear manufacture	480	70,000
Shoe components	223	28,000
Tanning	135	22,000
Service industries/workshops	710	18,000
Leather articles	52	4,900
Others	106	4,900
Leather and footwear machines	45	3,600
Export and forwarding agents	70	2,000
Total	1,821	153,400

Source: IDS Policy Briefing 10, 1997.

Box 4.4. Surgical instrument manufacture in Sialkot, Pakistan

The surgical instrument cluster in Sialkot produces scissors, forceps, and other precision instruments, using stainless steel. It involves over 300 manufacturers, subcontracting work to more than 1,500 SMEs, and acquiring inputs from 200 local suppliers and more than 800 service providers.

Over 90% of output is exported and this cluster accounts for more than 20% of global trade, making Pakistan the second largest producer after Germany.

Source: Nadvi (1999).

4.4. Non-equity based global value chains: The role played by key governors

In an increasing number of cases, producers sell into final product markets which are characterized by either weak or absent equity links, but which nevertheless do not involve arms-length relationships. Global production networks are coordinated by key firms in the chain who determine who is incorporated into global production networks, what standards these producers need to achieve in order to participate in these chains, who will monitor these standards, and who will assist producers to achieve them (Kaplinsky and Morris, 2001). These “governors” play an extremely important role in the modern era of globalization which, as we saw earlier, can be distinguished from nineteenth century internationalization precisely because of the complex and coordinated roles in which global production networks operate.¹⁰

¹⁰The concept of “governorship” was first elaborated by Gereffi (1994).

Box 4.5. Joint action and the dynamism of SME clusters in developing countries

A recent comparison has been made between four industrial districts in Brazil, India, Mexico and Pakistan (Schmitz, 2000b). The first three specialized in leather footwear and related industries, and the Pakistan cluster in surgical instruments.

Number of firms and workers in four clusters

	<i>Footwear and related industries</i>			<i>Surgical instruments</i>
	<i>Guadalajara Mexico</i>	<i>Sinos Valley Brazil</i>	<i>Agra India</i>	<i>Sialkot Pakistan</i>
Manufacturers of end product				
—number of firms	315	391	4,500	300
—number of workers	15-20,000	83,800	48,000	10,000
Suppliers of inputs				
—number of firms	160	260	75	260
—number of workers	?	55,000	?	2-3,000
Subcontractors				
—number of firms	?	760	225	1,500
—number of workers	?	23,400	2,000	9,000

In each case, the cluster faced a major challenge in its external environment. The greater the degree of cooperation in their responses, the better was the cluster's performance. Cooperation was much deeper when more than two firms cooperated, and when firms cooperated in a vertical value chain rather than with firms undertaking the same activities.

Correlation of cooperation and performance

<i>Cooperation</i>	<i>Mexico</i>	<i>Brazil</i>	<i>India</i>	<i>Pakistan</i>
Horizontal bilateral	Positive, significant at 10%.	Positive insignificant.	Positive, insignificant.	—
Horizontal multilateral	Positive, significant at 1%.	Positive, significant at 1%.	Positive, significant at 1%.	Positive, insignificant.
Vertical bilateral with suppliers	Positive, significant at 5%.	Positive, significant at 5%.	Positive, insignificant.	Positive, significant at 10%.
with sub-contractors		Positive, insignificant.	Positive insignificant.	Positive, significant at 1%.

Note: In the cases of India, Pakistan and Brazil the correlations are between *changes* and in the Mexican case between *levels* of cooperation and performance.

Source: Schmitz, 2000b.

Gereffi has made the very useful distinction between two types of value chains, based on the locus of governance in these chains.¹¹ As shown in box 4.6, the first describes chains in which a buyer at the apex of the chain plays the critical governing role. *Buyer-driven chains* are characteristic of labour intensive industries (and therefore highly relevant to developing countries) such as footwear, clothing, furniture and toys. The second describes a world where key producers in the chain, generally commanding vital technologies, play the role of coordinating the various links. In these *producer-driven* chains producers take responsibility for assisting the efficiency of both their suppliers and their customers. In more recent work, summarized here in figure 4.3, Gereffi has pointed out that producer-driven chains are more likely to be characterized by FDI than are buyer-driven chains (Gereffi, 1999b). He also argues that each of these different types of value chain is associated with different types of production systems. More contentious is the suggestion that producer-driven chains are a reflection of the old “import substituting industrialization order”, whereas buyer-driven chains are more attuned to the outward-oriented and networked production systems of the 21st century.

From the perspective of developing country producers, the role played by these governors is critically important in determining:

- Whether they are to be incorporated in global value chains;
- Which market segments they will serve in these value chains;
- Which functions they will undertake in these value chains; and
- In which areas they will be allowed to upgrade their capabilities.

Box 4.6. Buyer and producer driven value chains

“Producer-driven commodity chains are those in which large, usually transnational, manufacturers play the central roles in coordinating production networks (including their backward and forward linkages). This is characteristic of capital- and technology-intensive industries such as automobiles, aircraft, computers, semiconductors, and heavy machinery.”

“Buyer-driven commodity chains refer to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralized production networks in a variety of exporting countries, typically located in the third world. This pattern of trade-led industrialization has become common in labour-intensive, consumer goods industries such as garments, footwear, toys, house wares, consumer electronics, and a variety of handicrafts. Tiered networks of third world contractors that make finished goods for foreign buyers generally carry out production. The specifications are supplied by the large retailers or marketers that order the goods.”

Source: Gereffi, 1999b.

4.5. Vertically integrated global production networks: The changing role of FDI

The final major category of how producers are inserted into global markets is through the conduit of FDI. This may either be as subsidiaries or affiliates of TNCs, or (and this is more often the case with SMEs) by feeding into the operations of TNC

¹¹The distinction between buyer- and producer-driven chains is not as clear as it sounds and has recently been contested. For a discussion of these issues, see Kaplinsky and Morris (2001).

Figure 4.3. Principal features of producer- and buyer-driven chains

	<i>Producer-driven commodity chains</i>	<i>Buyer-driven commodity chains</i>
Drivers of global commodity chains	Industrial capital	Commercial capital
Core competences	Research & development; production	Design; marketing
Barriers to entry	Economies of scale	Economies of scope
Economic sectors	Consumer durables Intermediate goods Capital goods	Consumer non-durables
Typical industries	Automobiles; computers; aircraft	Apparel; footwear; toys
Ownership of manufacturing firms	Transnational firms	Local firms, predominantly in developing countries
Main network links	Investment-based	Trade-based
Predominant network structure	Vertical	Horizontal

Source: Gereffi, 1999b.

subsidiaries. The motives for FDI are, of course, complex and dynamic, varying over time by sectors and by the nature of the host and home countries in which they operate. Painting with a broad brush, it is possible to identify three major eras of FDI over the past century, as summarized in figure 4.4:

- ❑ In the first half of the twentieth century, FDI was driven by two primary incentives. Insofar as it fed into domestic markets, the primary drivers were location costs. The high cost of international transport and the perishability of many inputs (particularly in the food processing sector) led many large firms to set up operations in host countries. Although some FDI was also stimulated by tariffs in some countries (for example in the auto industry in Britain, France and Germany), this was not a dominant driver. Insofar as FDI was outward-oriented, this tended to apply to the resource and commodity sectors where environmental factors or raw material deposits required production at source.
- ❑ During the second period, the post-war “Golden Age”, many countries introduced industrial policies specifically designed to encourage FDI. Much inward-oriented FDI was therefore driven by the desire to “jump” tariff boundaries. The incentive for primary and commodity exports remained an important driver for FDI.
- ❑ In the third period—1980-2000—an increasingly important factor underlying outward-oriented FDI was the search for low labour costs, which was driven initially by the success of the four East Asian “tigers”. For example, export-processing zones grew in significance. But as the 1990s wore on, the search for foreign production sites was no longer based only on a search for cheap labour, since many developing country producers had developed other capabilities, including capital markets providing cheap credit and good infrastructure. At the same time, the “dematerialization” of production in many sectors meant that primary commodities were becoming relatively less important. Trade barriers were being reduced universally, and the “tariff jumping” incentive for domestically oriented FDI was becoming less important.

Figure 4.4. Four eras of FDI

	<i>Inward Orientation</i>		<i>Outward Orientation</i>		
	<i>Location economies</i>	<i>Tariff jumping</i>	<i>Resource based</i>	<i>Low labour costs</i>	<i>Low total costs</i>
Pre-1950	✓	Growing importance	✓		
1950-1980	✓	✓	✓		
1980-2000	✓	Declining importance	Declining importance	✓	Growing importance
Early 21st century	Growing importance with just-in-time production			Declining importance	

Now, in the 21st century we can see new factors influencing the location of FDI. A dominant factor is the increasing importance of just-in-time production. This has meant that proximity of suppliers to final manufacturers has grown in importance and clusters of FDI are co-locating to achieve systemic efficiency in production. Some of this is destined for the domestic market, and in other cases these clusters also serve export markets. At the same time, the trends of the late 20th century towards declining importance for commodities and for sources of cheap labour (as opposed to low overall costs) are being sustained. From the perspective of SMEs, the implications of these two developments are reasonably clear. Insofar as they are to feed into global markets served by FDI in the early 21st century, they need to develop the capability to serve TNC subsidiaries not just with low labour costs but also with low total costs, and to deliver to these networks on a just-in-time and total quality control basis. Their chances of thriving through resource-based activities or low labour costs alone are not likely to be high.

But there are other trends which are simultaneously affecting the way in which SMEs are being incorporated into the global economy. Here two contrasting developments can be identified—one characteristic of buyer-driven chains, and the other of producer-driven chains. In the first case, particularly in the buyer-driven chains producing final consumption goods such as clothes, footwear, toys and consumer electronics, there is an increasing trend for large firms to retreat from production and to buy-in products made to their close specifications. This is because the barriers to entry in production have declined as more and more countries around the world have developed their industrial sectors, as indicated in figure 4.4 above. In these sectors, therefore, global producers are therefore moving to become global buyers as explained in box 4.7.

In order to achieve this shift, however, these global buyers are required to introduce global standards to ensure that their suppliers meet the quality standards which they require, as well as the environmental and labour standards which their customers are demanding (see chapter 3 above).

A second trend, found more in producer-driven chains, runs in the opposite direction. Instead of global TNCs outsourcing production to independent suppliers, they are increasingly insisting on controlling the production process itself. A good example of this is the automotive sector. Here a major competitive battle is being fought at the assembler end of the value chain—between gigantic TNCs such as

Box 4.7. From producing globally to buying globally

For many decades Levi-Strauss has been the most prominent brand name in jeans production. It prided itself on its global production network and on its profit-sharing schemes with its workforce. Even as major rivals retreated out of production, Levi-Strauss retained its global production system through much of the 1990s.

However, towards the end of the decade, profits began to decline. From 1990 to 1999, Levi's market share of men's jeans dropped to 25 per cent from 48 per cent. For the first time the company began to question whether it was equipped to control the production process in-house. Would it make more sense to perhaps concentrate on design, marketing and buying (as Nike does) and leave production to independent producers?

Indeed this is precisely the direction Levi is moving towards. In 1999, the company announced it was closing half of its 22 plants in Canada and the United States.

According to John Ermatinger, the president of the Americas division of Levi-Strauss: "Our strategic plan in North America is to focus intensely on brand management, marketing and product design as a means to meet the casual clothing wants and needs of consumers. Shifting a significant portion of our manufacturing from the United States and Canadian markets to contractors throughout the world will give the company greater flexibility to allocate resources and capital to its brands. These steps are crucial if we are to remain competitive."

Production is now seen as only one element to a company's commercial strategy. Developing global supply chains and targeting key value-added functions are also priorities.

Source: *The Scotsman*, Feb 27, 1999.

General Motors, Ford, Toyota, DaimlerChrysler, Nissan-Renault and Volkswagen. Their comparative advantage lies in the design, systems-integration and branding link in the value chain. For this to function effectively, they prefer to subcontract modular designs (and increasingly also manufacture) of key component sub-systems to global suppliers such as Delphi, Visteon, Magna, Johnston Controls and Bosch. This is referred to as *global sourcing*. As part of this process, they require their suppliers to ensure *follower supply*, i.e. a network of subsidiaries feeding components into these assembly plants on a just-in-time basis. The net outcome of this is that local ownership and local technology in these sectors is becoming increasingly difficult to sustain as shown in box 4.8.

In summary, therefore, insofar as FDI is concerned, we can observe a complex set of developments in the early 21st century. In some sectors, direct ownership of production is becoming less important and there is increasing scope for domestically owned producers. This is particularly evident in buyer-driven chains producing consumer goods for final consumption. In these cases, SMEs may be able to feed directly into global product markets, or to do so by linking with locally owned firms. In contrast, in the technologically more complex producer-driven chains, there is diminishing scope for locally owned firms. Here SMEs feeding into global product markets will need to link themselves more directly into hierarchical, TNC-controlled value chains. In part three we will review the policy implications of these diverging trends.

Box 4.8. Global sourcing and follower supply in the global auto components industry: The death of the local firm?

In South Africa, as in many other countries, local component firms are finding it increasingly difficult to withstand the pressures of global sourcing and follower supply. The major assemblers are demanding that their needs be met by suppliers who are using the technology of their key first-tier suppliers. When asked how they saw their supply-base evolving, the assemblers described a uniformly changing world, from locally owned firms using local technology to suppliers using proprietary technology from one of the global first-tier suppliers, preferably within an FDI relationship.

South African automotive industry: Assemblers' perceptions of their supply chains, 1997-2003

<i>Category</i>	<i>1997</i>	<i>2000</i>	<i>2003</i>
Wholly owned subsidiaries of TNC automotive component manufacturers	26%	31.7%	37.5%
Joint ventures between SA companies and TNC automotive component manufacturers	18.5%	26%	32.5%
SA companies with technology agreements with TNC automotive component manufacturers	29.8%	24.3%	20%
SA companies with South African technologies	25.8%	18%	10%
Total	100%	100%	100%

Source: Barnes, 2000.

Note: Totals may not add to 100 due to rounding.

This phenomenon of declining local ownership is not unique to South Africa. In Brazil, many smaller firms left the industry in the early 1990s. At the same time, larger Brazilian firms were taken over by transnational companies and by the end of 1997, only one of the largest 13 component manufacturers in Brazil remained in local ownership (Humphrey, 2000).

PART THREE

5. WHAT CAN BE DONE TO ASSIST SMEs TO PARTICIPATE GAINFULLY IN GLOBAL PRODUCT MARKETS?

In discussing policies which might be utilized to promote the gainful participation of SMEs in the global economy, it is helpful to begin by reviewing the key conclusions emerging from parts one and two of this study. Working on the basis of these conclusions we can identify a range of policies that may be geared towards aiding the insertion of SMEs in global markets. The major conclusions are as follows:

1. Many developing countries have moved decisively towards a trajectory of trade policy liberalization and globalization. These policies have improved the welfare of many, but absolute impoverishment remains a major problem in the global economy, and relative impoverishment (i.e. inequality) has also widened almost everywhere.
2. Developing countries have significantly increased their share of global manufactured exports since 1985. Most of these gains were made between 1985 and 1995, however, and a large and growing share (now more than 70 per cent of the total) comes from only 10 developing countries. Developing countries had a stable share of FDI during the 1990s. A large part of FDI into developing countries was invested in privatizations, mergers and acquisitions and did not significantly augment capacity. China has become a dominant party, both in its share of incoming FDI and of developing country manufactured exports.
3. The losers from globalization are not confined to those who have been excluded from global processes. The issue is therefore not so much whether to participate in the global economy, but how to do so in a manner which provides for sustainable income growth. This is a particular problem for poor producers, and for SMEs. The prevalence of losers in liberalized economies suggests that there remains an important role for government policy. But this policy agenda differs from the previous era of import-substituting industrialization (before the mid-1980s) and when deregulation and liberalization policies were being implemented (between the mid-1980s and 2000).
4. The lessons from international experience suggest that the path to sustainable income growth lies in the capacity to upgrade. The lessons from value chain analysis suggest that upgrading must be seen in a systemic context, involving process, product, functional and chain upgrading. The ability to meet changing process and product standards is an increasingly important component of process upgrading.

5. Yet upgrading in itself may not be adequate to provide for sustainable income growth. Efficient producers need to be connected to appropriate final markets, and here too value chain analysis has a key role to play in assisting producers in general (and SMEs in particular) to participate effectively in the global economy.
6. There are four major conduits which connect producers to final markets—selling into final markets on an arms-length basis; as clusters of producers with similar levels of power; by feeding into value chains where an unrelated party coordinates global production networks; and as part of a TNC-family.
7. During the 1990s, FDI flows to developing countries increased significantly, although to some extent and in some areas, much of this involved the acquisition of privatized State assets. However, trade flows increased even more rapidly, and in some sectors, trade through quasi-hierarchical governed value chain networks substituted for FDI as industry leaders subcontracted production to low-cost economies. This does not mean that TNCs became less important in global economic activity, but that many of them changed their role from being global producers to become global buyers and global coordinators (“governors”). This is particularly evident in the buyer-driven chains.
8. Experience from many countries, including developing countries, shows that SMEs can indeed participate effectively but almost always this requires that they cooperate to achieve collective efficiency. This cooperation may either be horizontal (for example, exporting as a network of firms), or vertical (for example, exporting through incorporation in global value chains).
9. TNCs often take active steps to improve the capabilities of their suppliers (although not so frequently as textbooks might suggest). They also sometimes assist customers. However, these efforts seldom progress beyond the first tier, and invariably miss SME suppliers and customers. Moreover, there is a pervasive pressure on TNCs to reduce their number of suppliers, and this increasingly has the effect of removing many SMEs from the supply chain.

It is in this context that the upgrading of SMEs should be initiated. Two basic sets of policies are required to meet this agenda. The first are policies which are specifically targeted directly at SMEs, designed to assist their upgrading directly, either as individual producers or as a network of producers. The second set of policies are those which target roles played by large firms—including TNCs—in intermediating the indirect participation of SMEs in global product markets. Of course, these two sets of policies are complementary rather than exclusive.

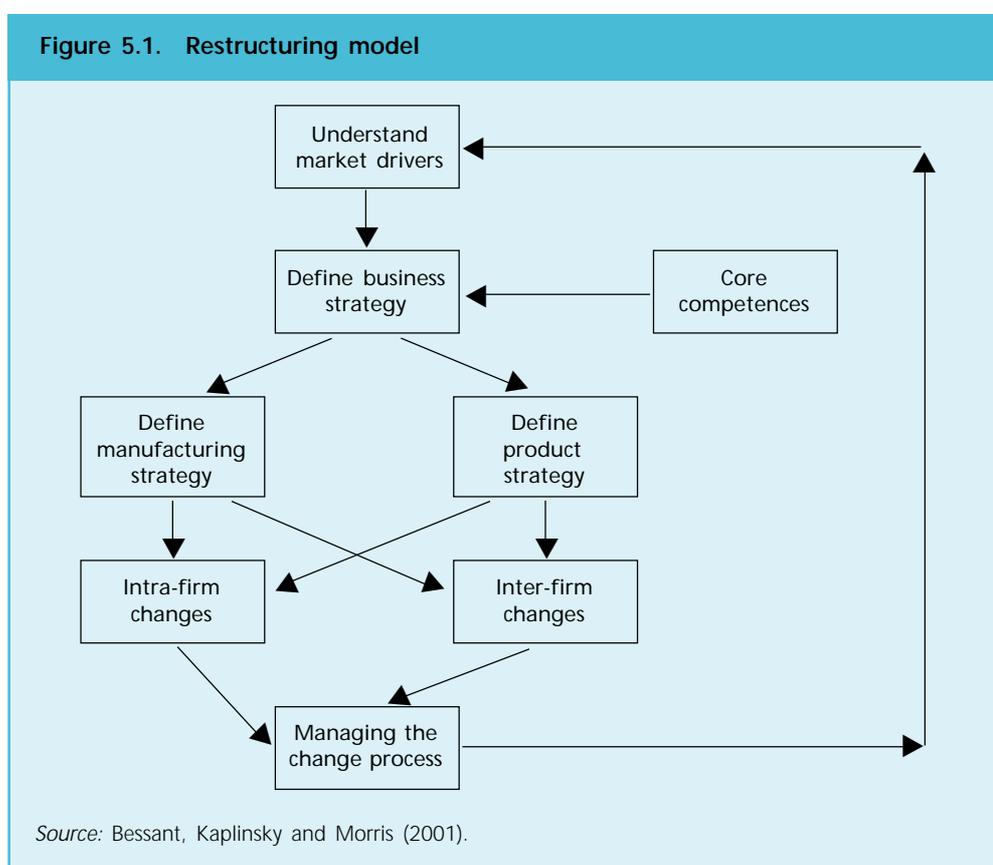
In assessing feasible policies we will use a framework which focuses on the conduits in which SME producers can enter global product markets, namely through impersonal, market-based sales; through network-based collective efficiency; through governed quasi-hierarchical value chains; and through hierarchical FDI networks. However, since policies towards both quasi-hierarchical value chains and FDI value chains are very similar, we will treat these as a single group of policies.

5.1. Policies directly assisting SMEs to participate in global product markets

Enterprises selling into global markets on an arms-length basis have no one to “hold their hand” and assist them with upgrading. The problems are particularly acute for

SMEs, since unlike large firms they do not have the capacity to buy knowledge from large internationally-oriented consulting firms. Governments and international agencies therefore have a role to play in promoting their upgrading, in a way which facilitates their entry into global product markets. But what avenues should this policy support take?

The problems that these firms face are generic, although there are sectoral differences. As such, their restructuring agenda can essentially be separated into seven inter-related and generally sequential challenges (Bessant, Kaplinsky and Morris, 2001). These are presented in figure 5.1. In each case most SMEs will need support, since the process of market-based adjustment is characteristically too slow, and if left to market forces alone, many SMEs will not have the resources to finance a delayed process of restructuring. However, this policy agenda is not uniquely relevant to SMEs and there may or may not be a need for government to give them a privileged position in terms of policy delivery. This will depend on the prevailing circumstances and the available resources.



The seven key policy challenges required to promote restructuring are:

1. *Understanding the market.* SMEs are often particularly poorly placed to understand the nature and complexity of the markets they serve. They fail to recognize that these markets are both segmented and dynamic, and that different market segments are characterized by different critical success factors. This is a particular problem when the markets in question are distant and serve consumers with different tastes. In terms of priorities, therefore, providing support for SMEs to enhance their capacity to “hear their markets” is a first-order policy imperative.

2. *Identifying core competences.* It is not uncommon for SMEs to lack a grasp of their distinctive core competences, i.e. the capabilities that meet all of the following three conditions: they are of value to final customers; they are relatively unique; and they are difficult to copy. Without core competences, it will be difficult for SMEs to participate effectively in global product markets. If the required core competences do not exist, does the enterprise have the capacity to develop them? By the same token, do enterprises have the will and strategy to jettison any historic competences which have become out-dated?
3. *Defining an appropriate business strategy.* An effective business strategy comes from an alignment of market opportunities and core competences. If the two do not match, there is little scope for sustained penetration of external markets. In many cases SMEs either have no explicit strategy, or it is one which the existing and potential portfolio of competences does not support.
4. *Defining a product strategy.* The dynamic nature of most final markets requires a capability to upgrade the products offered. In some cases the modifications may be so minor that they are well within the existing grasp of SMEs, but more often they require new skills. New product development will thus be an important agenda for SMEs.
5. *Defining a manufacturing strategy.* Even if an SME is aware of what it needs to produce, does it have the capability to manufacture this with the appropriate flexibility and quality, and at the required price? This may involve a change in internal quality and logistics procedures, new forms of layout, and/or the acquisition of new equipment
6. *Improving value chain links.* However efficient an individual SME may be, its effectiveness will be limited if it operates in an inefficient value chain. Given their inherently small size, there will be a limit to the extent to which SMEs can influence their customers and suppliers, but it nevertheless remains an arena of action for them.
7. *Implementing change.* The business world is awash with intelligent strategies—whether these be business, product or manufacturing strategies. But implementation is a different story, and this is a challenge which requires heavy investments in people and in the development of trust relations, processes of continuous improvement and changes in organizational structures.

5.2. Policies to assist networks of SMEs in accessing global product markets

Market-based market entry—with “faceless” producers selling to “faceless” customers—is only one way of SMEs entering global product markets. Another form of entry is when groups of SMEs join together to meet common needs. In some cases this joint action can occur between groups of firms with similar operations (for example, clothing manufacturers) and in other cases when SMEs are in a chain relationship to each other (for example, component and clothing manufacturers). It may also be worth bearing in mind here the conclusion of other work on SME clusters that vertical networks seem to operate more effectively than horizontal networks.

There are three major reasons why policy towards SMEs may favour the development of approaches which promote networks. In the first place, the SMEs involved are

confronted with similar constraints, similar problems and similar opportunities. This experience may make it easier to design and deliver targeted policies. Secondly, delivering policy support to individual small firms is prohibitively costly, whereas policy delivery incorporating network facilitators (as in the case of Denmark described in box 5.1) may be a very cost-effective way of providing support to the SME sector. Finally, learning networks are becoming increasingly important and work best when firms are of similar size and confront similar problems.

**Box 5.1. Delivering policy support to networks of firms:
The case of Danish network brokers**

One of the most significant attempts to build on networking principles to assist SME performance was the Network programme which ran in Denmark from 1988 to 1993. The inspiration for this programme was the experience of small firm networks and clusters in Italy, and whilst supply chain learning was not seen as a direct theme in the programme, much of the experience gained has relevance. In particular the programme (which was designed by the Danish Technological Institute) emphasized the use of Network Brokers to facilitate the creation and operation of networks. This process-centred approach was critical since the prevailing culture of Danish industry was not very receptive to cooperation.

- ❑ The Danish programme reached out to 5,000 enterprises out of a target group of 10,000-12,000 enterprises.
- ❑ The programme both drew on, and contributed to, Danish business culture.
- ❑ The programme was well-received—75 per cent of the SMEs believed that the programme raised their ability to compete, and 90 per cent said that they would continue the practice of networking beyond the subsidy period.
- ❑ A number of other countries have drawn directly on this Danish experience, e.g. Spain, Portugal, France, UK, Norway, USA, Canada, Australia and New Zealand.

Source: Bessant, Kaplinsky, Lamming, Ross and Vaughan (1999).

Networked collaboration between firms can occur in relation to seven major restructuring objectives:

1. *Hearing the market.* As in the case of individual SMEs, groups of SMEs can join together to undertake market research which may be too costly for individual firms. This may require the hiring of specialized consulting expertise, of designers, buying market-information (for example, information of new fashion-colours in the clothing industry) or joining together to support one or more of the network members to visit final markets.
2. *Joint selling.* Marketing abroad is a particularly costly activity for SMEs, and here governments have an important role to play. Supporting joint-marketing efforts therefore represents an important way of assisting SMEs to access global product markets, and this may be achieved most cost-effectively when the support is offered to networks of firms. Trade fairs have proved to be an important instrument of support to SME clusters in developing countries, as illustrated in box 5.2.

Box 5.2. Trade fairs to facilitate joint export marketing by SMEs

The problem with professionally run trade fairs is that the cost of exhibiting can deter small firms from participating. In Brazil, this problem is alleviated by the Brazilian Service for Small Enterprises (SEBRAE), which offers to pay half the exhibition cost for small firms. This helps small firms to exhibit at the same place as large firms. While large firms tend to have larger stalls, the small firms also benefit from a guaranteed visibility and exposure. The advantage of this kind of subsidy is that it is easy to administer and induces firms to be outward-looking.

The above scheme supports individual enterprises. Supporting groups of firms is an alternative which tends to be more appropriate for exhibition at distant, especially international, fairs. This was how ceramic producers from the Philippines launched themselves internationally. With external support they exhibited their range of products at European fairs. The Brazilian Sinos Valley provides a further example. In the late 1960s when the first steps towards exporting were taken, groups of local shoe producers went to overseas trade fairs in the US and Europe. The local Business Association organized the groups and the venture was partially subsidized by the government. The idea has been repeated more recently (1995) when a group of producers from the Paranhana Valley (an extension of the Sinos Valley) exhibited at the main Asian Shoe Fair in Hong Kong. The group approach seems important not just because a joint stand increases the visibility at the fair. Large fairs are intimidating and a joint stand enables producers to face the world's buyers and competitors with greater confidence. It also creates bonds between participating producers, and enables new impressions and ideas to be discussed and absorbed more fully. While such group ventures are not always harmonious, more information and ideas tend to be retained, and more follow up is likely, be it in cooperation or rivalry.

Source: Humphrey and Schmitz (1998).

3. *Joint buying.* There are clearly economies of scale in buying. These problems are often compounded when inputs come from abroad, and many SMEs are either weighed down by heavy inventory costs or have to pay more for their inputs. Joint purchasing is therefore an important policy option, and may be facilitated both by government activity and by knowledge of external experience.
4. *Product development.* It is unlikely that SMEs will collaborate in product development, since each firm will see this as a specific competitive advantage. However, there are strong incentives for firms to sell with a common brand-name and to a common standard. This is a particularly important challenge with respect to external markets, since characteristically export orders will be in large volumes and will be much bigger than the production capabilities of individual SMEs.
5. *Process improvements.* Manufacturing processes in SMEs will frequently require support. This is less likely to be the case when machinery and equipment are concerned unless this is for shared equipment (where international experience is not very positive). Rather, it is in regard to disembodied inputs where joint action by SMEs (for example, the hiring of consultants to serve the needs of a number of firms) can be most effective. Similarly, government support also has a role to play here, for example, in relation to supporting advice on quality control and logistics programmes to a number of SMEs.
6. *Standards and codes.* These are becoming increasingly important. ISO 9000 and ISO 14000 require extensive documentation as firms implement these programmes, and it is probably appropriate that individual firms carry these

costs directly (or with firm-specific government support). However, monitoring can be costly, and especially when the auditors come from some distance to assess performance in a single firm (which may only take half a day), it will make sense for firms to join together to spread these costs. These standards are becoming increasingly important, and SMEs may be reluctant to engage in intangible activities since they tend to be unaware of their significance. Consequently, government support for these auditing activities may be a useful form of assistance.

7. *Learning networks.* There is growing international evidence that learning networks provide an ideal mechanism for promoting the gainful participation of SMEs in global product markets. These learning networks enable small firms with similar problems to come together, and in sharing their experience, to move forward programmes of continuous improvement. Many of these networks exist in Europe, as shown in box 5.3, but there are also important cases in developing countries, examples of which are presented in box 5.4. The evidence suggests that governments have an important role to play in supporting these initiatives—for example, the government meets two-thirds of the costs of the South African Benchmarking Club, with the remaining one-third being financed by the firms themselves.

Box 5.3. Examples of European experience with learning networks

Aluminium Kingdom: Sweden

'Aluminiumriket' (Aluminium Kingdom) is a regional network comprising some 500 local firms producing aluminium products. Between 1987 and 1995 networks were established on quality, welding and productivity, and to promote a 'Discover Aluminium' marketing exhibition. In 1997 cooperation began on a distance-learning programme and the network was formally incorporated in 2000.

The network consists of 21 core companies, all of whom pay membership fees. It also includes local government and technology centres. In 1990, it developed at least 20 new projects; introduced new courses at Vaxjo University and for employees of member companies; organized 10 seminars; promoted marketing and positioning; established international contacts and made applications for EU grants.

Construction Industry Research and Information Association (CIRIA), United Kingdom

CIRIA was established in 1994. By 2001 it had 180 members and now organizes 35-40 workshops a year, focusing on:

- Benchmarking;
- Briefing;
- Choice of procurement route;
- Culture and safety;
- IT;
- Integrating design and construction;
- Partnering;
- Risk management;
- Standardization and pre-assembly;
- Supply chain management;
- Sustainability;
- Value management; and
- Whole-life costing.

Box 5.3. (continued)

'Forum Medicine Technology and Pharma', Germany

This network, based in Bavaria, results from an initiative taken by the Bavarian State Ministry for Economic Affairs, Transport and Technology and is managed by a publicly held company that supports economic and business development on a broad scale. The company consists of an interdisciplinary team of scientists and engineers with many years of industrial experience. It has competence in technology transfer and partnering and rapid decision processes. Its primary activities include:

- ❑ 3-5 innovative cooperation projects in science and industry;
- ❑ 10-40 joint pavilions on international high-tech fairs;
- ❑ 300-800 technology congresses and exhibitions;
- ❑ 400-1,000 forums;
- ❑ 1,000-2,000 project initiatives throughout Bavaria; and
- ❑ 2,000 technology partnering market via the Internet.

Source: Adapted from Tsekouras and Papaioannou (2001).

Box 5.4. Learning networks in the South African automotive components industry

An auto-components Benchmarking Club in South Africa has been operating since the mid-1990s, and has achieved remarkable success. At its outset, the average level of inventory performance of South African auto component firms was not only much lower than that of their European counterparts, but the dispersion of their performance was also abnormally high—the industry had a long tail. Similar data was generated for a range of other key performance indicators. Four years later, it is not just that average performance has improved and is closing in on European competitors, but also that the tail has shortened significantly.

These advances occurred through a programme in which the SMEs were benchmarked against both their domestic and international competitors. Over a period of months they helped each other to improve, meeting at member's plants and sharing expertise through best-in-class workshops.



A number of lessons can be learnt from this experience. First, collective action helps to achieve collective efficiency—a chain is only as strong as its weakest link. Second, firms need a wake-up call which means something to them—in this case, what their customers thought of their performance. Third, benchmarking performance against domestic competitors is important, but so too is benchmarking against international competitors. Fourth, achieving collective efficiency almost always involves the input of external facilitation and skills, although these need to be carefully crafted and sensitive to the firm's real needs and capabilities. Fifth, government assistance can go a long way to stimulating learning networks (the Government supported two-thirds of the costs of this benchmarking club). And, finally, learning networks are sensitive and fragile—members continually face new challenges (in this case, the takeover of local firms by transnational components producers)—and learning networks must not only foster agility amongst members, but also be agile themselves.

Source: Kaplinsky (2001).

5.3. Policies assisting SME participation in global value chains

Although SMEs may participate in global product markets either as independent producers, or through networked cooperation, most often they do so through participating in global value chains. These value chains may take a variety of forms and may involve one or more key parties in the chain providing “governance” with respect to:

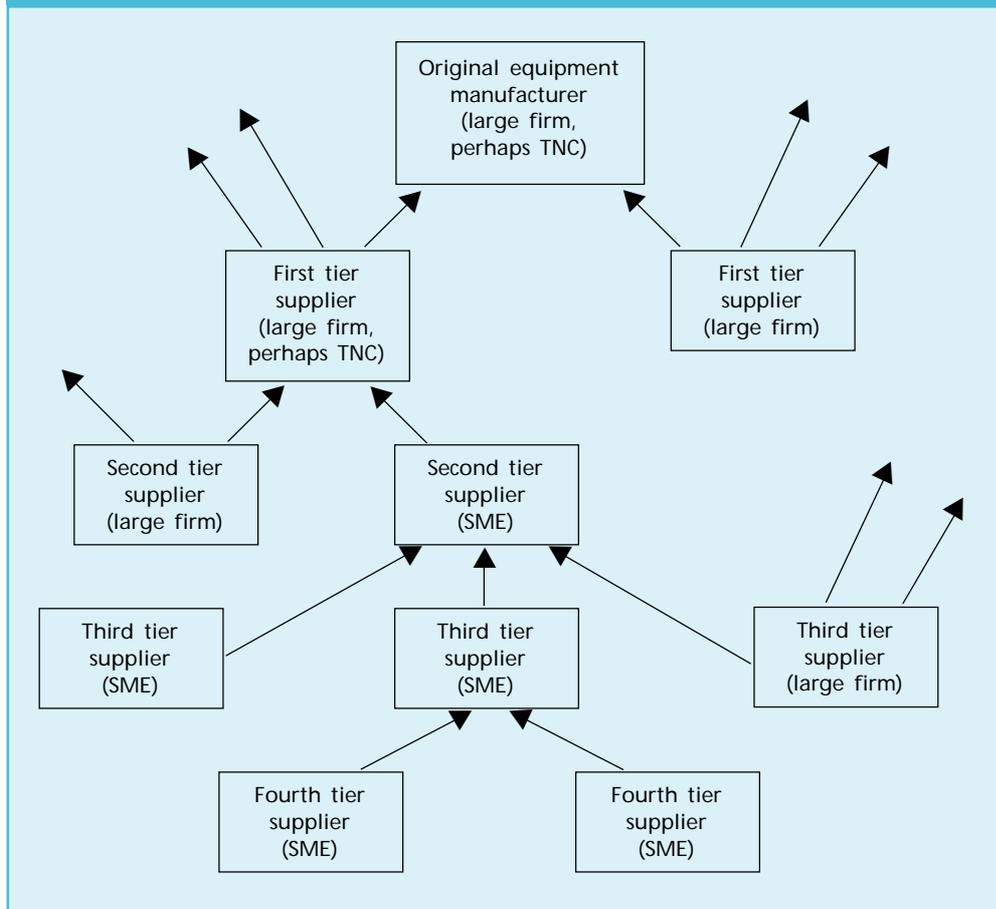
- Who enters the market?
- Who does what in the chain?
- What standards individual firms have to achieve?
- Who monitors these standards? and
- Who assists chain members in achieving these standards?

At the same time, these value chains may have either strong ownership links (the dominant party *orders* its subsidiaries to perform in certain ways), or weak ownership links (the dominant governor *demand*s performance of chain members). These ownership links may either be with local firms (national governors) or with foreign firms (TNC governors).

How do SMEs fit into these value chains? The answer is that in general they do so as peripheral suppliers to one or more of the links in the chain, usually as second or third tier suppliers, as illustrated in figure 5.2. Occasionally SMEs may serve more than one customer, but in general they tend to be much more closely tied to single customers than do larger firms.

From the point of view of the SME, therefore, its future will generally be tied very closely to that of its customer(s), or in some cases its suppliers. On the other hand, its customer(s) may have a variety of suppliers, and there will be significant asymmetries both in their relative degrees of dependence and their relative degrees of economic power. At the same time, however, the customers of SMEs in these value chains will not be insensitive to the problems of their SME suppliers, since they may often produce critical components.

Figure 5.2. How SMEs fit into value chains



Bearing in mind that a value chain is only as competitive as its weakest link, more and more governors are putting resources into supply chain management, and then into supply chain learning. The focus of a sequential programme of supply chain development and supply chain learning best practice is shown, and it is to this which government policy has to relate. The major issues are:

1. *Wake-up call.* The key governing party in the chain has to recognize it has a problem in its own operations, which requires it to restructure in order to meet competitive pressures. This restructuring may either be proactive, in which case this chain is a first-mover, or it may be reactive.
2. *Internal change.* Having recognized the need to upgrade, the governor has to move to improve the chain's internal operations. In this, as we saw above, it needs to identify rapidly growing and profitable market segments, to understand the critical success factors in these markets, to relate these to its core competences, and then to orient its internal manufacturing operations to meet the needs of its chosen market segments.
3. *Targeting value chain efficiency.* Having recognized the need to change the chain's internal operations, and having taken action to do so (since this is a necessary precursor to supply chain management), the governor needs to recognize the need for its own value chain to become more effective. It also needs to recognize that this value chain improvement must extend beyond the

first tier, and that the SME suppliers in its chain may have particular problems.

4. *Rationalization of vendor/customer base.* Almost always the first step, which the governor will need to take, will be to rationalize its supply or customer base. Although this may lead to a reduction in the number of first tier suppliers, insofar as the role played by SMEs in its chain is concerned, it need only ensure that its first or second tier suppliers are capable themselves of upgrading their SME third and fourth tier suppliers.
5. *Communication of new requirements to vendors.* Having rationalized the supply base, the governor then needs to communicate its needs—generally with regard to quality, cost and delivery—to its supply base.
6. *Monitoring and sanctioning new performance by suppliers.* Supplier performance then has to be measured. Where deficient, suppliers need to be negatively sanctioned, and this may or may not be complemented by positive rewards to those suppliers who perform well.
7. *Supply chain learning.* So far, all of the above steps are the relatively easy part, and only set the basis for a process of actively assisting suppliers in general, and SMEs in particular, to upgrade their operations. The really sophisticated value chain governors will then also go on to recognize that they can not only assist their suppliers to upgrade, but can also learn from them as well.

There is increasing recognition of the role which effective governors can play in improving the performance of their supply chain, including that of SMEs. This applies equally to low, middle and high income countries, as illustrated by the examples presented in boxes 5.5 to 5.7 respectively. However, it must be noted that the rhetoric in this area far outstrips practice. At best most firms recognize the need for supply chain efficiency and are systematic about communicating their requirements to their suppliers. In a few cases they will take active steps to assist their suppliers' upgrading, but this seldom exists beyond the first tier. Some reports suggest that the Japanese *keiretsu* system works effectively with regard to SME upgrading (Cusumano, 1985). This is a system whereby first tier suppliers take responsibility for cascading improvements right through their supply chains. But some scepticism is warranted even in this case.

This weak performance on supply chain upgrading represents both a threat and opportunity for public sector support institutions. Incorporation in global value chains as third and fourth tier suppliers is probably one of the most effective ways of ensuring that SMEs participate gainfully in the global economy. But for this to happen, these SMEs will have to learn to meet the demands of world class manufacturing—low and falling costs, high and rising quality, and flexible and reliable deliveries. Although some isolated cases exist in which value chain governors take an active lead in promoting *and assisting* SME upgrading, the reality is that the motivating force for upgrading will have to come either from the SME sector itself, or from targeted policies by government and international organizations.

It is here that the policy circle is squared. That is, policies designed to promote the gainful incorporation of SMEs in global product markets through general industrial support, or through programmes designed to promote networked upgrading, are a necessary complement to the larger task of assisting SMEs to upgrade so that they can play a more effective role in governed global value chains.

Box 5.5. Upgrading SMEs in global value chains: Electric motors in India

Crompton Greaves Ltd (CGL) is one of the 30 largest firms in India, manufacturing a range of equipment driven by electric motors. Because India has long had a programme of support for small-scale industries, much of its supply base is made up of very small firms, employing less than 20 people.

For some years CGL has had a sophisticated programme of supply chain upgrading based on global best practice. Its suppliers are classified into four groups:

- ❑ Suppliers whose deliveries are checked at CGL;
- ❑ Self-certified vendors who take responsibility for their own quality auditing before delivery;
- ❑ Zero defect suppliers who achieve consistent defect free output; and
- ❑ Total-quality suppliers who complement their activities with wide-ranging improvement programmes.

CGL's supplier development programme is designed to assist its suppliers to move through these stages. Each of its plants has a structured programme to support this, and SMEs are targeted for specific support. Out of a sample of 50 suppliers, 13 reported that a CGL materials manager visited them on a weekly basis, and nine on a monthly basis; in addition, a quality manager visited 16 on a weekly basis, and a further seven on a monthly basis. As a consequence, supplier performance improved significantly. Although the programme's achievements are not as great as its ambition, there is clear evidence that this support has assisted the upgrading of its supply base in general and its SME suppliers in particular.

Source: Humphrey, Kaplinsky and Saraph (1998).

Box 5.6. Upgrading SMEs in global value chains: Semiconductors in Malaysia

Intel is a large TNC, employing more than 75,000 people globally. Its Malaysian subsidiary was established in 1972, initially assembling components and then testing them from 1978. By 2000 it had 8,000 employees, and engaged in a successful programme of supplier upgrading. Two-thirds of their 300 suppliers were locally owned, and local purchases exceed \$330 million.

Suppliers are ranked in terms of their stability, resourcefulness, capabilities and competitiveness. Those that meet the basic criteria qualify for a supply chain-upgrading programme which includes:

- ❑ Training in collaboration with government skill centres;
- ❑ Short courses run by Intel;
- ❑ Coaching for continuous improvement programmes;
- ❑ Assisting firms to develop technological strategies; and
- ❑ Assisting suppliers in finding other business opportunities.

Intel collaborates closely with Government in this programme.

It is significant that Intel is prepared to assist its suppliers primarily in the area of process upgrading. It regards its product and functional skills as its core competence and takes no active steps to enhance the design skills of its suppliers.

Source: Presentation by S. Y. Foong of Intel Malaysia, as presented in UNIDO (2001).

Box 5.7. Upgrading SMEs in global value chains: Semiconductor equipment in the United Kingdom

“Semi-equip” is a UK-based capital equipment manufacturer for the semiconductor industry. Although not well developed by comparison with the Intel programme (see box 5.6), it has a supplier-development programme which has had some impact on its suppliers. A number of these suppliers are SMEs.

The benefits achieved by these parties in the chain are as follows:

- ❑ The Governor had annual sales of \$500m, and employed 2,900 workers. Its sales quadrupled over a 10 year period and incoming deliveries in kanbans increased from 30 per cent in 1996 to 80 per cent in 1999.
- ❑ The first tier supplier employed 81 people and had sales of \$6 million. Its on-time deliveries improved from 87 per cent in 1997 to 100 per cent in 1998, the generation of scrap material as a proportion of total material used fell from 1.5 per cent in 1995 to 0.15 per cent in 1999, and set-up time as a percentage of overall production time decreased from over 15 per cent in 1995 to under 10 per cent in 1999.
- ❑ The second tier supplier employed 9 people and had sales of \$750,000. Sales grew by 29 per cent and stock-turns increased from 8.5 in 1996 to 10.7 in 1998; deliveries in 1996 took over a week while in 1999 the company offered next day delivery.

Source: Bessant, Kaplinsky, Lamming, Ross and Vaughan (1999).

PART FOUR

6. HOW CAN MULTILATERAL ORGANIZATIONS SUPPORT THE GAINFUL INSERTION OF SMEs IN GLOBAL VALUE CHAINS?

6.1. Policy conclusions

Whilst globalization has provided the opportunity for an increasing number of producers to participate gainfully in the global economy, it has at the same time heightened competition. This offers opportunities to producers in developing countries, but also poses threats. In particular, the threat arises even though producers may deepen their insertion into the global economy, they may become worse off. Immiserizing growth—an enhanced level of economic activity which yields declining returns in terms of global purchasing power—is one possible outcome of participation in the global economy. This affects SMEs both directly as exporters, and also indirectly as participants in value chains organized by large firms, including TNCs.

Avoiding these pitfalls requires that producers develop their capacities to upgrade. Value chain analysis is helpful here in identifying four areas of upgrading—in processes, in products, in functions and by moving between chains. But value chain analysis is also helpful in specifying the ways in which producers connect with final markets. Upgraded capabilities alone are not a guarantee of sustainable income growth, since it is also necessary to be connected to customers in a way that allows these capabilities to be gainfully applied to production. This need to upgrade effectively and to participate gainfully in global product markets provides particular challenges for SMEs. Whilst their size allows them to be agile and to access low-cost inputs, it also limits their ability to control their external environment and to realize the scale economies which are involved in upgrading.

Much of the required adjustment will occur through the interaction of market forces. Competitive forces lead individual firms to upgrade their processes and products, and to change their functions and their chains; they also often lead large firms to work systematically to improve the capabilities of their supply chains. The fact that some firms—SMEs and TNCs alike—do not manage to make this adjustment effectively and then die is in itself of no particular policy concern. The problem arises when, collectively, firms respond either inappropriately or at a sub-optimal pace so that the economic system as a whole expands at a sub-optimal pace. Another policy problem arises when a particular group of firms—characterized for example by size or location—performs poorly. In these cases of market failure, there is an important role for

policy to support upgrading activities in the corporate sector. But before policy targets particular market failures, the prime role of industrial policy is to ensure effectively functioning markets, and there is a battery of policies available for this purpose, including trade and competition policy, policies towards financial markets, and policies directed at human resource development.

The increased pace of change in the era of globalization, coupled with the social implications of this change in work organization, and in trust relations between firms, has raised the risk of market failure, particularly insofar as SMEs are concerned. In these cases, policy makers have a role to play in supporting upgrading efforts. But this is a role which is best served when policies support and complement firm-level activities, rather than forcing firms into particular directions. The nature of these policy measures will vary, depending upon the particular elements of market failure involved. This may require a response at the local, the national or the international level. And, finally, insofar as SMEs are concerned these supportive policies may be aimed either directly at SMEs, or at firms which are buyers from or sellers to SMEs, and consequently may have a role to play in assisting the upgrading of these firms.

6.2. The Importance of partnerships

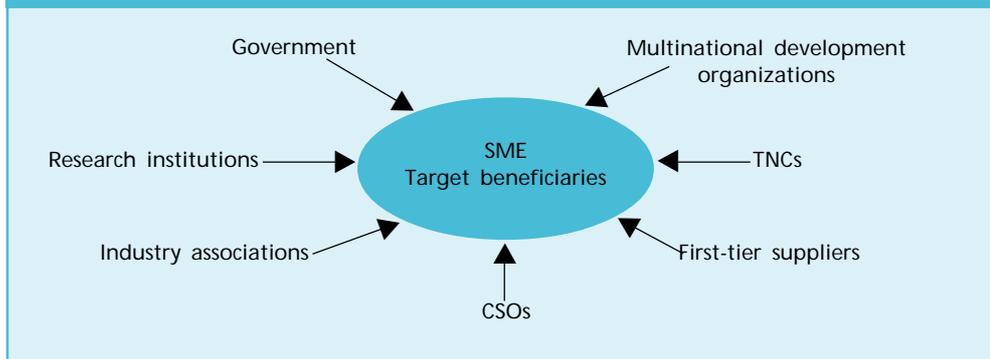
The need for support measures is often particularly acute when the upgrading effort is directed at SMEs occupying the lower tiers of supply chains. UNIDO's experience in such cases has shown that the most effective approach to such an upgrading effort is to bring together all appropriate stakeholders in multi-sector partnerships. These may include, inter alia, the government, final-goods producers and first tier suppliers, industry associations, research institutions and civil society organizations (CSOs), especially those promoting corporate social responsibility and triple-bottom-line accounting systems.

This innovative approach pioneered by UNIDO is based on the insight that industry in developing countries and transition economies can only achieve world class practices if all stakeholders in an industrial sector work together to restructure and improve the overall performance of the industry. It brings together the expertise and experience of key players in a particular industry, thereby enabling the comparative advantage of each partner to be brought into play. This enables the partners to find effective and sustainable solutions to the problems faced by the SMEs in developing countries that the partnership is seeking to address. In particular, it provides a vehicle for enterprise-led support to be complemented by policy. This approach is represented graphically in figure 6.1.

Each of the partners plays an important and distinct role within the partnership programme, and it is only the combination of the specific strength and expertise of each partner that guarantees the sustainable success of the programme for the benefit of SMEs.

- *The Government* provides political endorsement and recognition for the programme as well as financial support as a manifestation of national ownership.
- *Industrial Corporations* provide inputs on technical and managerial know-how and skills relevant to the sector, and introduce aspects of international best practice. They also provide access to top international engineers, who help to design and implement the enterprise-oriented shop-floor and training events, and train national engineers. This helps to ensure a sustainable increase in competitiveness for the participating SMEs.

Figure 6.1. Multi-sector partnerships for SME development



- ❑ *Civil Society Organizations* play a dual role. National CSOs represent the membership of the target sector and are therefore crucial for the sustainability of the programme. International CSOs ensure that “proper investments” are made within the context of a positive public policy dialogue with the partners
- ❑ *Research Institutions* expose managers of participating enterprises to international best practices and provide technical training and diagnostic studies at the enterprise level.
- ❑ *The target SMEs* not only receive shop-floor training but participate actively in the development of the partnership. As they are the ultimate beneficiary, it is imperative to integrate them into the partnership process at the earliest stage.
- ❑ *Multinational Organizations* play an important role in identifying potential partners, negotiating agreements between the various partners and serving as a central information node for the programme to ensure that relevant information and data is distributed to the partners. Further, they also contribute their special expertise in various development-related fields.

In the specific case of UNIDO the support services provided by the Organization cover such areas as SME development, quality management, investment and technology promotion, and cleaner production. Through these services UNIDO can offer support with training and the provision of comparative experience. It can also support process upgrading activities and provide advice on quality control and logistics programmes to SMEs. Similarly, UNIDO can play an important role in helping to develop common standards and alerting SMEs to the importance of these evolving standards while informing them of international best practices and experience in how to meet these standards. Finally, through the adoption of the partnership approach UNIDO can play a vital role in helping to promote networks between individual firms and establishing contacts between SME suppliers and potential large-scale buyers, both domestic and foreign.

Based on UNIDO’s experience in the field of partnership-building for development, the basic characteristics of a successful partnership comprise:

- ❑ Agreement on joint objectives;
- ❑ A collaborative relationship to achieve the objectives, with a clear definition of roles; and
- ❑ A shared responsibility and accountability for the outcomes.

In addition, UNIDO's experience has shown that:

- ❑ The partnership must be an instrument—often time-bound, and not an end in itself;
- ❑ The benefits should exceed the costs; and
- ❑ The benefits must be shared fairly.

Moreover, such partnerships must have the ultimate aim of enhancing the productive and managerial capabilities of the beneficiary SMEs to the point that they can insert themselves autonomously and unaided into broader value chains, both global and domestic, and prevail against the competitive pressures they will face in these markets. This requires, in particular, an effort to raise the skill levels and technological capacities of the beneficiary SMEs, so that they can meet the standards of quality and timeliness required of them by their clients, and in time develop the innovative capacities to broaden their product range. In terms of the analysis presented above, this reflects a gradual passage through the full upgrading scenario from process upgrading to product upgrading and further to functional upgrading and, eventually, chain upgrading.

The development of these skills and capacities often necessitates targeted efforts by specialized agencies and institutions which have to augment the signals and incentives for upgrading provided by the markets. In this context, multinational organizations such as UNIDO can play an important catalytic role in supporting SME upgrading. Through their global outreach and experience they can provide access to international best practices in the establishment of conducive policy frameworks for SME development. Similarly, they can help to identify and disseminate the lessons learnt by successful support institutions in various parts of the world. Such institutions include the regional development agencies established in several parts of the United Kingdom, or Enterprise Ireland, which has made a significant contribution to raising the attractiveness of Irish SMEs as suppliers and vendors of TNCs. A particularly successful example of such an institution is also provided by the Penang Skills Development Centre (PSDC) in Malaysia, which in addition adopts a partnership approach to SME upgrading as detailed in box 6.1.

Equally importantly, multilateral organizations such as UNIDO have the capacity to bring together all relevant stakeholders in a particular industrial subsector and design partnerships to support the development of SMEs, in particular those operating in the lower tiers of value chains. A specific example of such a partnership is given by a project launched by UNIDO in 1999 to support the development of second and third tier SMEs producing automotive components in the western region of India. Based on the model illustrated in figure 6.1, UNIDO brought together a group of partners able to provide complementary resources and services to the beneficiary SMEs. The range of partners participating in this project is indicated in figure 6.2.

The successful implementation of this pilot project (see UNIDO, 2000a, and UNIDO 2000b), has resulted in its subsequent extension to the southern region of India, and to the formulation of a number of other projects by UNIDO in collaboration with the international business community:

- ❑ A cooperation agreement with Ericsson, which resulted in the publication of a joint study between UNIDO and Ericsson on E- and M-Business for Industrial Development and is expected to lead to a number of joint technical cooperation activities;

**Box 6.1. Capacity-building for SMEs:
The Penang Skills Development Centre**

The Penang Skills Development Centre (PSDC) is a non-profit society which all incorporated companies in Malaysia can join. Founded in 1989, it had 85 members by 2000, when it ran 522 courses. Its mission is to promote shared learning, in order to reduce costs and facilitate more interaction, for the manufacturing and services sectors. Its services are demand driven, being determined by the needs of TNCs operating in Malaysia and local firms.

The PSDC represents a partnership between the Federal Government of Malaysia and the State Government of Penang (which provide political will, facilities, and financial and fiscal support), the industrial sector (which offers leadership of the initiative, know-how and technical resources, member fees and other support), and academia (which provides consultancy, training and research). Its Chief Executive Officers are selected from major firms, most of which are in the electronics and engineering branches. A large number of TNCs with a presence in Malaysia have joined the initiative. In addition, some countries give bilateral support.

Apart from increasing skill levels in SMEs, PSDC also looks at possibilities for career advancement in major TNCs. In addition, PSDC has working groups for total production management, senior-level HRD issues and best practices in global supplier development programmes. By the end of September 2000, over 60,000 people had taken part in over 3,000 courses.

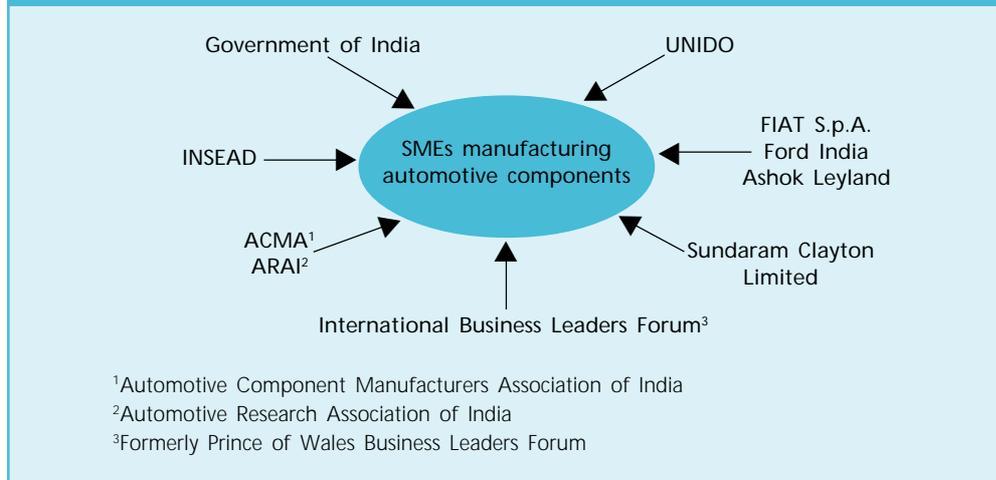
As industrial HRD requirements have increased over the years and Malaysian industries have continued to move up the value chain, PSDC is adapting its training courses and will soon be offering, among others, an MA in engineering, courses on software simulation, and e-learning for management skills. Some of these courses are provided in partnership with other institutions, such as the University of Warwick in the United Kingdom.

In March 2000, PSDC launched the Global Supplier Programme for Malaysian companies, together with a number of global companies and the Government. The philosophy behind this programme is: the more capable a country's SMEs are, the more likely it is that TNCs will initiate partnerships. In the programme, SMEs are adopted by TNCs, who transfer technologies and skills and monitor SME progress. By the end of October 2000, eight TNCs and nine SMEs in the electronics industry had declared their intention to participate in the programme. Over time, PSDC plans to launch the programme in other parts of Malaysia as well; to study foreign examples to provide benchmarks for local industries; and to create training programmes for domestic design and development capabilities.

Source: UNIDO (2001).

- ❑ A project on electronic procurement for SMEs in the MERCOSUR region, undertaken jointly with a number of international information technology firms;
- ❑ A project on the development of the two- and three-wheeler industry in Nigeria, undertaken in cooperation with the world's largest manufacturer of such vehicles, the Indian firm Bajaj; and
- ❑ A regional project covering several countries in South Asia to promote the concept of the "triple bottom line" among export-oriented SMEs facing increasing consumer demands for environmentally friendly and socially responsible production processes.

Figure 6.2. The UNIDO Partnership Programme: Pilot project to develop the automotive components industry in India



The electronic procurement programme referred to above is designed to help in promoting the technological modernization of SMEs giving them better access to the potential benefits that the “New Economy” could bring. Information technology developments may either enhance or limit the access to the new economy dynamics and, consequently, can either open new business opportunities or create new threats. Support measures are required because the process so far shows that the electronic markets tend to concentrate on large firms, with access for smaller businesses not occurring spontaneously.

The e-procurement programme targets two groups of beneficiaries. Directly, the Programme will assist SME support agencies in their efforts to advise SMEs on how to prepare for the use of e-procurement facilities. Main beneficiaries, yet indirectly targeted, will be the SMEs in the manufacturing sector in the MERCOSUR countries.

The strategy of this programme relies on two main elements. The first element is focused on providing tools to assess and enhance the capability of manufacturing SMEs to do e-business and, in particular, e-procurement, thereby improving their competitiveness and achieving greater integration into international supply chains. The second parallel element is the creation of partnerships that can induce broader cooperation processes. These partnerships will involve various actors, such as SME promotion associations, responsible business associations, local and national governments, banks and leading international firms as technology providers. Some of the most important contributions to the Programme come from private sector companies (multinational and domestic) in the concerned countries. Obviously, their involvement is not merely philanthropic; it makes business sense, as it opens new market opportunities for all participants

In addition to such operational activities, the UNIDO Partnership Programme has stimulated a conceptual dialogue on lessons learned from similar activities by a variety of institutions. In this context an expert group meeting was held in October 2000 bringing together representatives of the business community, academia and other UN and bilateral agencies with active partnership programmes to exchange views on how best to formulate and implement partnership-based projects. A document recording the proceedings of this meeting has recently been published (UNIDO, 2001). The present Report on broader economic and policy issues related to the operation of the UNIDO Partnership Programme represents a further step in the direction of developing an overall framework.

In conclusion, it may be noted that UNIDO recognizes the critically important role that industrial SMEs can play in promoting industrial and economic development, but also understands that they can only fulfil this potential by upgrading and entering gainfully into global value chains. Through its Partnership Programme, UNIDO is seeking, together with its partners, to support the upgrading efforts of SMEs and their insertion into the globalized world markets. It regards the Partnership Programme as a vehicle that is technically sound, economically viable, institutionally sustainable, and—as a model—replicable in different country and sector contexts. The evidence so far, though still limited due to the relatively young age of the Programme, suggests that it is on the right track.

ANNEX 1

TRENDS IN FOREIGN TRADE

Table A1. World exports as share of GDP, 1988-1998
(percentage)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
World	18.7	19.2	19.4	19.7	20.3	19.9	20.6	21.6	21.8	22.9	..
High income non OECD	86.3	84.7	83.4	81.8	80.9	80.7	79.9	85.3	82.6	80.0	77.1
High income OECD	15.9	16.7	16.7	17.5	17.4	17.3	18.0	19.0	19.4	20.6	..
Upper middle income	22.2	20.9	20.8	20.3	20.7	20.3	21.1	22.9	23.1	24.1	26.2
Middle income	22.7	22.1	22.0	21.2	25.3	23.5	23.8	25.2	25.1	26.1	28.4
Lower middle income	..	24.6	24.7	23.2	34.9	30.2	29.3	29.9	29.0	30.2	32.7
Low income	13.4	14.0	16.9	18.1	18.8	17.7	22.1	21.7	20.1	21.5	23.7
South Asia	7.8	8.6	9.0	10.2	10.7	11.6	11.6	12.5	12.1	12.4	12.7
Sub-Saharan Africa	26.6	27.1	27.2	25.5	25.4	26.3	28.2	29.1	30.3	29.6	28.4
Middle East and North Africa	24.0	25.6	32.6	31.7	31.3	31.0	32.7	31.8	31.9	31.7	25.1
Latin America and the Caribbean	15.4	15.0	14.0	13.0	13.5	13.2	13.3	15.1	15.5	15.1	14.8
East Asia and Pacific	25.5	24.6	26.2	27.1	27.4	26.5	30.8	31.4	29.7	33.4	41.8
Europe and Central Asia	..	22.7	22.9	22.0	39.9	31.4	30.6	31.4	30.3	31.2	34.9

Source: IMF, (1999).

Table A2. World exports by sector, 1985-1997
(US\$ million)

	1985	1990	1992	1993	1994	1995	1996	1997
World—service	377,441	780,799	922,358	937,535	1,032,101	1,188,336	1,269,547	1,321,230
Developed countries	292,350	623,852	729,850	718,735	766,892	871,908	924,023	951,825
Developing countries	78,338	147,029	178,332	201,932	232,871	273,471	295,515	320,143
Central and Eastern Europe	6,754	9,918	14,176	16,868	32,338	42,956	50,009	49,262
World—manufactured goods	1,188,683	2,423,359	2,731,978	2,724,867	3,146,371	3,747,673	3,885,770	4,065,247
Developed countries	930,757	1,909,311	2,102,389	2,022,180	2,297,680	2,708,409	2,784,534	2,884,785
Developing countries	173,254	431,341	581,760	649,328	775,626	941,902	997,030	1,066,928

Table A2. (continued)

	1985	1990	1992	1993	1994	1995	1996	1997
Central and Eastern Europe	84,672	82,709	47,828	53,359	73,066	97,364	104,208	113,536
World—primary goods	692,574	926,948	904,259	874,745	972,489	1,134,731	1,203,652	1,196,013
Developed countries	307,388	468,055	490,455	466,722	513,003	602,411	623,645	613,290
Developing countries	312,700	365,518	369,115	360,893	394,263	452,464	493,229	496,252
Central and Eastern Europe	72,487	93,376	44,689	47,131	65,224	79,858	86,779	86,472
Unallocated	52,182	86,073	90,542	99,900	108,290	152,132	138,069	152,599

Source: Adapted from UNCTAD (2000a).

Table A3. Index of exports by sector from developing countries, 1992-1997 (1992=100)

	1992	1993	1994	1995	1996	1997
Services	100	113	131	153	166	180
Primary	100	98	107	123	134	134
Manufacturing	100	112	133	162	171	183

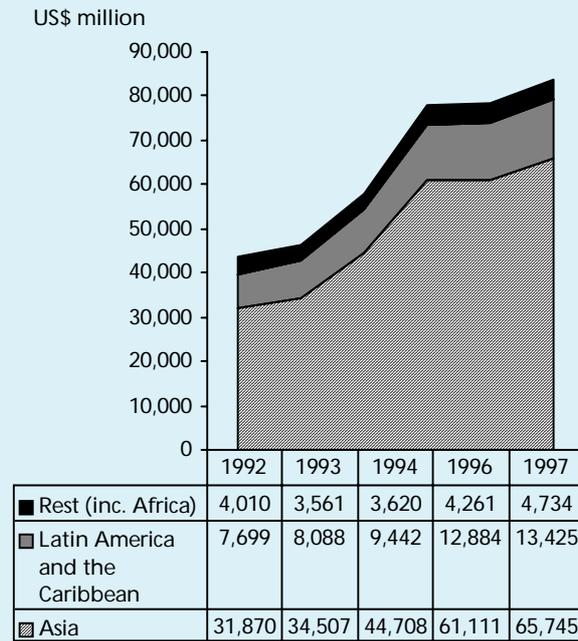
Source: Adapted from UNCTAD (2000a).

Table A4. Manufactured exports from developing regions, 1985-1997 (US\$ million)

	1985	1990	1992	1993	1994	1995	1996	1997
Africa	4,035	12,524	12,322	12,241	13,615	15,769	15,951	16,778
Asia	134,883	364,261	488,450	547,601	661,821	805,192	845,563	916,916
Latin America and the Caribbean	25,651	42,755	68,607	79,436	91,477	111,223	125,885	123,410
Europe	8,400	11,033	11,558	9,265	7,813	8,741	8,556	8,798
Oceania	285	768	823	785	900	977	1,075	1,026

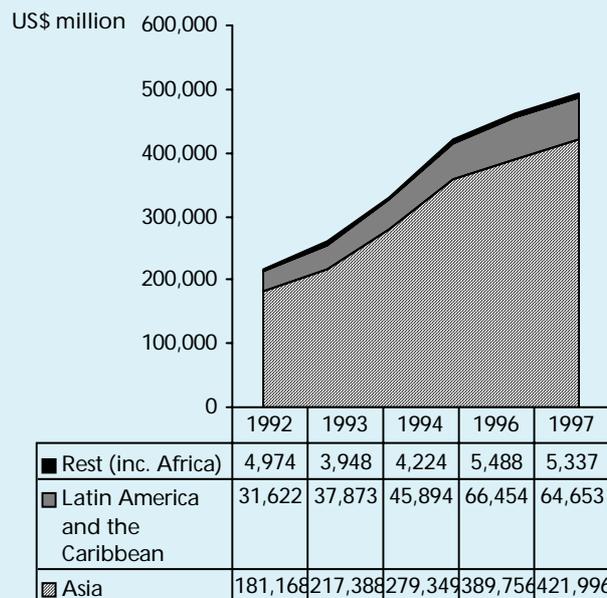
Source: Adapted from UNCTAD (2000a).

Figure A1. Exports of chemical products (SITC 5) from developing regions, 1992-1997
(US dollars)



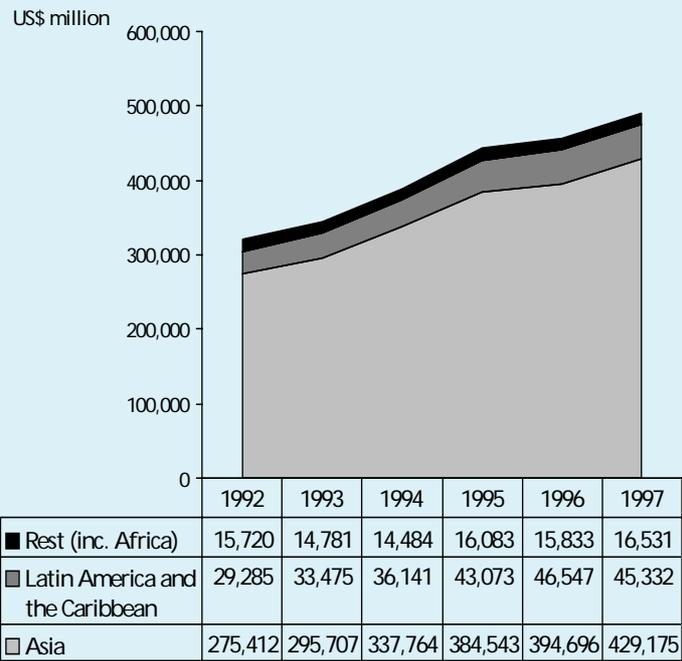
Source: Adapted from UNCTAD (2000a).

Figure A2. Exports of machinery and transport (SITC 7) from developing regions, 1992-1997
(US dollars)



Source: Adapted from UNCTAD (2000a).

Figure A3. Exports of other manufactured goods (SITC 6 + 8 less 68) from developing regions, 1992-1997
(US dollars)



Source: Adapted from UNCTAD (2000a).

ANNEX 2

TRENDS IN CAPITAL FLOWS

Table B1. Share of capital flows to developing countries, 1990-1999
(percentage of total capital flows)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	100	100	100	100	100	100	100	100	100	100
Official flows	57	50	35	24	21	21	10	12	16	18
Private flows of which	43	50	65	76	79	79	90	88	84	82
International capital markets of which	19	21	34	46	39	38	48	39	30	16
Debt flows of which	16	15	25	22	23	24	33	30	26	7
Bank lending	3	4	11	2	4	12	12	15	14	-4
Bond financing	1	9	7	17	17	12	20	14	12	9
Other	11	2	7	4	2	0	1	1	-1	2
Equity flows	3	6	9	23	16	14	16	9	5	9
FDI	24	28	31	30	40	41	42	50	54	66

Source: World Bank, (2000).

Table B2. Total FDI inflows by region, 1993-1999
(US\$ million)

	1989-1993 Annual average	1994	1995	1996	1997	1998	1999
World	190,629	255,988	331,844	377,516	473,052	680,082	865,487
Developed countries							
of which:	140,088	145,135	205,693	219,789	275,229	480,638	636,449
EU	78,511	76,866	114,387	108,604	128,574	248,675	305,058
USA	44,781	45,095	58,772	84,455	105,488	186,316	275,533
Japan	737	912	39	200	3,200	3,192	12,741
Developing countries							
of which:	46,919	104,920	111,884	145,030	178,789	179,481	207,619
Africa	3,472	5,632	4,699	5,522	6,896	7,519	8,949
Latin America and the Caribbean	13,136	30,091	32,816	45,890	69,172	73,767	90,485
Europe	221	483	483	1,026	1,020	1,459	2,315
Asia	29,854	68,606	73,324	92,434	101,575	96,504	105,621
Pacific	236	172	563	158	126	231	248
Central and Eastern Europe	3,623	5,932	14,267	12,697	19,034	19,963	21,420

Source: World Bank, (2000).

Table B3. FDI inflows to main developing country recipients, 1993-1999
(US\$ million)

	1993*	1994	1995	1996	1997	1998	1999
China	8,852	33,787	35,849	40,180	44,236	43,751	40,400
Brazil	1,534	2,590	5,475	10,496	18,743	28,480	31,397
Argentina	2,266	3,490	5,315	6,522	8,755	6,526	23,153
Mexico	3,705	10,973	9,526	9,186	12,831	10,238	11,233
Republic of Korea	956	991	1,357	2,308	3,088	5,215	10,340
Chile	993	2,733	2,956	4,633	5,219	4,638	9,221
Thailand	1,899	1,343	2,000	2,405	3,732	7,449	6,078
Malaysia	3,320	4,581	5,816	7,296	6,513	2,700	3,532
Venezuela	612	813	985	2,183	5,536	4,435	2,607
Peru	154	3,084	2,000	3,226	1,702	1,903	2,067
Colombia	571	1,445	968	3,112	5,639	2,907	1,396
Total of next 10 after China	16,010	32,043	36,398	51,367	71,758	74,491	101,024
Total of rest after top 11	22,057	39,090	39,637	53,483	62,795	61,239	66,195
Total developing countries	46,919	104,920	111,884	145,030	178,789	179,481	207,619

*1989-1993 annual average.

Source: Adapted from World Bank (2000) and UNCTAD (2000b).

Table B4. Mergers and acquisitions (sales), 1990-1999
(US\$ million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	150,576	80,713	79,280	83,064	127,110	186,593	227,023	304,848	531,648	720,109
Developed countries										
of which:	134,239	74,057	68,560	69,127	110,819	164,589	188,722	234,748	445,128	644,590
EU	62,133	36,676	44,761	38,537	55,280	75,143	81,895	114,591	187,853	344,537
USA	54,697	28,226	15,839	19,978	44,730	53,237	68,069	81,707	209,548	233,032
Japan	148	178	230	93	750	541	1,719	3,083	4,022	15,857
Developing countries										
of which:	16,052	5,838	8,119	12,782	14,928	15,966	34,700	64,573	80,755	64,550
Africa	485	37	177	301	154	200	700	1,682	675	591
Latin America	11,494	3,529	4,196	5,110	9,950	8,326	20,508	41,103	63,923	37,166
Europe	..	62	132	23	86	112	78	238	19	1,437
Asia	4,073	2,182	3,614	7,347	4,701	6,950	13,368	21,293	16,097	25,062
Pacific	..	28	..	2	37	67	46	257	41	95
Central and Eastern Europe	285	818	2,602	1,155	1,333	5,938	3,601	5,526	5,101	9,124

Source: UNCTAD (2000b).

Bibliography

- Abaladajo, M. and H. Schmitz (2001), "Enhancing the Competitiveness of Small and Medium Enterprises in Africa: A Strategic Framework for Support Services", *Report prepared for the Economic Commission for Africa*, Brighton: Institute for Development Studies.
- Altenburg, T. (2000), "Linkages and Spill-overs between Transnational Corporations and Small and Medium-Sized Enterprises in Developing Countries—Opportunities and Policies", *GDI Reports and Working Papers 5/2000*, Berlin: GDI.
- Bairoch P. and R. Kozul-Wright (1996), "Globalization Myths: Some Historical Reflections on Integration, Industrialization and Growth in the World Economy", *UNCTAD Discussion Papers No 13*, March, Geneva.
- Baldwin, R.E. and P. Martin (1999), "Two Waves of Globalization: Superficial Similarities, Fundamental Differences", in H. Siebert (ed.), *Globalization and Labour*, Tübingen: Mohr Siebeck.
- Barnes, J. (2000), "World Class Manufacturing as a Necessary but Insufficient Condition for Industry Success: A Case Study of the South African Automotive Components Industry", *PhD Dissertation*, Durban: University of Natal.
- Bessant, J., R. Kaplinsky and M. Morris (2001), "Looking for World Class: A Guidebook for Assessing Competitive Performance and Practice", *mimeo and CD ROM*, Brighton: Centre for Research in Innovation Management, University of Brighton and Institute for Development Studies, University of Sussex.
- Bessant, J., R. Kaplinsky, R. Lamming, A. Ross and R. Vaughan (1999), "Using Supply Chains to Transfer Learning about Best Practice", *Report to U.K. Dept. of Trade and Industry*, Brighton: Centre for Research in Innovation Management, University of Brighton.
- Cusumano M. A. (1985), *The Japanese Automobile Industry: Technology and Management at Nissan and Toyota*, Cambridge, Mass.: Harvard University Press.
- Elkington, J. (1997), *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, Oxford: Capstone.
- Feenstra R. C. (1998), "Integration of Trade and Disintegration of Production in the Global Economy", *Journal of Economic Perspectives*, Vol. 12, No. 4, pp. 31–50.
- Gereffi, G. (1994), "The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks", in Gereffi and Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, London: Praeger.
- Gereffi, G. (1999a), "International Trade and Industrial Upgrading in the Apparel Commodity Chain", *Journal of International Economics*, Vol. 48, No. 1, pp 37-70.
- Gereffi, G. (1999b), "A Commodity Chains Framework for Analysing Global Industries", in Institute of Development Studies, 1999, "Background Notes for Workshop on Spreading the Gains from Globalisation, www.ids.ac.uk/ids/global/conf/wksf.html.
- Hamel, G. and C. K. Prahalad (1994), *Competing for the Future*, Cambridge, Mass.: Harvard Business School Press.
- Hounshell, D. A. (1984), *From the American System to Mass Production, 1800-1932*, Baltimore: Johns Hopkins Press.
- Hummels D., Jun Ishii and Kei-Mu Yi (1999), "The Nature and Growth of Vertical Specialization in World Trade", *Staff Reports Number 72*, New York: Federal Reserve Bank of New York.
- Humphrey, J. (2000), "Assembler-Supplier Relations in the Auto Industry: Globalisation and National Development", *Competition and Change*, Vol. 4, No. 3, pp. 245-71.
- Humphrey, J., R. Kaplinsky and P. Saraph (1998), *Corporate Restructuring: Crompton Greaves and the Challenge of Globalisation*, N. Delhi: Sage Publications Ltd.
- Humphrey, J. and H. Schmitz, (1998), "Trust and Inter-firm Relations in Developing and Transition Economies", *Journal of Development Studies*, Vol. 34, No. 4, pp. 32-61.
- Humphrey J. and H. Schmitz (2000), Global Governance and Upgrading: Linking Industrial Cluster and Global Value Chain Research, *IDS Working Paper 120*, Brighton: Institute of Development Studies.

- IDS Policy Briefing 10, 1997.
- IMF (1999), *World Economic Outlook*, Washington, D.C.
- Kaplinsky R. (1990), *The Economics of Small: Appropriate Technology in a Changing World*, London: Intermediate Technology Press.
- Kaplinsky R. (1993), "Export Processing Zones in the Dominican Republic: Transforming Manufactures into Commodities", *World Development*, Vol. 22, No. 3, pp. 1851-1865.
- Kaplinsky, R. and J. Readman (2000), "Globalisation and Upgrading: What Can (and Cannot) be Learnt from International Trade Statistics in the Wood Furniture Sector?" *mimeo*, Brighton: Centre for Research in Innovation Management, University of Brighton and Institute of Development Studies, University of Sussex.
- Kaplinsky, R. (2001), "Learning Networks in the South African Auto Components Industry", *Innovation News*.
- Kaplinsky, R. and M. Morris (2001), A Manual for Value Chain Research, <http://www.ids.ac.uk/ids/global/>.
- Kaplinsky, R., M. Morris and J. Readman (2001), "Globalisation and Upgrading: Innovation and Learning in the Wood Furniture Value Chain", *Background Paper prepared for UNIDO World Industrial Development Report, 2001, mimeo*, Brighton: Institute of Development Studies, University of Sussex.
- Khan, A. R. (1999), "Poverty in China in the Period of Globalization: New Evidence on Trend and Pattern", *Issues in Development Discussion Paper 22*, Geneva: ILO.
- Lee, J. and J. Chen (2000), "Dynamic Synergy Creation with Multiple Business Activities: Toward a Competence-based Growth Model for Contract Manufacturers", in R. Sanchez and A. Heene (eds.), *Research in Competence-based Research, Advances in Applied Business Strategy Series, Vol. C*, JAI Press.
- Leonard-Barton, D. (1995), *Wellsprings of Knowledge*, Cambridge, Mass.: Harvard Business School Press.
- Lundvall, B. A. (1992), *National Systems of Innovation*, London: Frances Pinter.
- Maddison, A., (1995), *Monitoring the World Economy 1820-1992*, Paris: OECD.
- Merhav, M. (1969), *Technological Dependence, Monopoly and Growth*, Oxford: Oxford University Press.
- Monden Y. (1983), *Toyota Production System: Practical Approach to Production Management*, Atlanta: Industrial Engineering and Management Press.
- Nadvi, K. (1999), "Collective Efficiency and Collective Failure: The Response of the Sialkot Surgical Instrument Cluster to Global Quality Pressures", *World Development Special Issue on Industrial Clusters in Developing Countries*, Vol. 27, No. 9, pp. 1605-1626.
- Nadvi, K. and H. Schmitz (eds.) (1999), Special Issue on Industrial Clusters in Developing Countries, *World Development*, Vol. 27, No. 9.
- Nelson R. R. (1993), *National Innovation Systems: A Comparative Analysis*, New York: Oxford University Press.
- Schmitz, Hubert (1995), "Collective Efficiency: Growth Path for Small-Scale Industry", *Journal of Development Studies*, Vol. 31, No. 4.
- Schmitz, H. (1998) "Collective Efficiency and Increasing Returns", *Cambridge Journal of Economics*.
- Schmitz, H (2000a), "Global Competition and Local Cooperation: Success and Failure in the Sinos Valley, Brazil", *World Development Special Issue on Industrial Clusters in Developing Countries*, Vol. 27, No. 9, pp. 1627-1650.
- Schmitz, H. (2000b), "Does Local Co-operation Matter? Evidence from Industrial Clusters in South Asia and Latin America", *Oxford Economic Papers*, No. 3, pp. 323-336.
- Schmitz, H. and P. Knorringa (2000), "Learning from Global Buyers", *Journal of Development Studies*, Vol. 32, No. 7, pp. 177-205.
- Schonberger, R. J., (1986) *World Class Manufacturing: The Lessons of Simplicity Applied*, New York: The Free Press.
- Teece, D., and G. Pisano (1994), "The Dynamic Capabilities of Firms: An Introduction", *Industrial and Corporate Change*, 3, pp. 537-556.
- Tsekouras, G. and T. Papaioannou, (2001), *Public Support to Learning Networks in Europe: Critical Needs and Policy Issues*, Brighton: Centre for Research in Innovation Management, University of Brighton.
- UNCTAD (2000a), *Handbook of Trade and Development Statistics*, New York: United Nations.
- UNCTAD (2000b), *World Investment Report 2000: Cross-border Mergers and Acquisitions and Development*, New York: United Nations.
- UNIDO (2000a), *UNIDO Partnership Programme: Automotive Component Industry in India (Impact of Phase I)*, Vienna: UNIDO.
- UNIDO (2000b), *Industry for Growth in the New Millennium*, Vienna: UNIDO.
- UNIDO (2001), *UNIDO Partnership with Private Business: Rationale, Benefits, Risks and Approaches*, Vienna: UNIDO.
- Wood, A. (1997), "Openness and Wage Inequality in Developing Countries: The Latin American Challenge to East Asian Conventional Wisdom", *World Bank Economic Review*, Vol. 11, No. 1, pp. 33-57.
- World Bank (2000a), *Global Development Finance 2000*, Washington, D.C.: The World Bank.
- World Bank (2000b), *World Development Indicators*, Washington, D.C.: The World Bank.

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