# Enhancing the Role of SMEs in Global Value Chains




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# *Foreword*

The OECD Working Party on SMEs and Entrepreneurship (WPSMEE) has been studying the globalisation of SMEs since the mid-1990s. This process has recently been explored from the perspective of changes induced by globalisation to SMEs in global value chains (GVCs), as relationships among partners throughout the value chain are affected. Participation in GVCs may provide stability to SMEs and improve their productivity. However, to fully harness these potential gains, SMEs are challenged to upgrade their management, financing and technology. Co-operation within a network of upstream and downstream partners can help SMEs meet these challenges when the flow of information is transparent along the value chain, and when the rules of the game and fairness in business relations are respected.

During the course of 2006-2007 the Working Party carried out a study on enhancing the role of SMEs in global value chains. This study was in response to the 2004 Istanbul SME Ministerial Declaration where Ministers invited the OECD to consider *"enabling a better understanding of international value chains and the way in which SMEs can benefit from them."* The project analysed global value chains in five sectors where SMEs act as subcontractors or suppliers: *two manufacturing industries*: automotive and scientific and precision instruments; *two service industries:* software and tourism; and *one creative industry*: film production and distribution.

The report was prepared by Mariarosa Lunati, Senior Economist, SME and Entrepreneurship Division of the OECD Centre for Entrepreneurship, SMEs and Local Development (CFE) in co-operation with a Swiss research team led by Prof. Paul H. Dembinski (University of Geneva and University of Fribourg) and Fulvia Farinelli, Investment and Enterprise Competitiveness Branch, United Nations Conference on Trade and Development (UNCTAD). Alain Dupeyras, Head of the Tourism Unit of the SME and Entrepreneurship Division, developed input related to tourism issues, while Toru Ueno, SME and Entrepreneurship Division, oversaw the preparation of the Japanese input. The research project has been carried out under the supervision of Marie-Florence Estimé, Deputy Director of the CFE.

The study was partly funded by the Geneva International Academic Network (GIAN/RUIG), the Swiss State Secretariat for Economic Affairs (SECO) and the Japanese Ministry of Economy, Trade and Industry (METI). Several OECD members, and non-member economies participating in the *OECD Bologna Process on SME and Entrepreneurship Policies*, contributed to the project by undertaking case studies on specific industrial sectors. A steering group composed of representatives from Australia, France, Italy, Japan, New Zealand (Chair), the United States and the World Intellectual Property Organisation (WIPO) offered guidance throughout the study.

At the invitation of the Japanese Authorities, the Working Party also organised a global conference on "Enhancing the Role of SMEs in Global Value Chains" in Tokyo from 31 May to 1 June 2007. The abridged proceedings with selected remarks and presentations from the Conference, as well as the *"OECD Tokyo Action Statement for strengthening the role of SMEs in Global Value Chains",* which was the main output of the Conference, will be available on line.

The involvement of SMEs in global value chains is an essential dimension of the globalisation process. Globalisation will remain at the core of the analytical and policy work of the OECD Working Party on SMEs and Entrepreneurship to assist governments in enhancing SME competitiveness.



Sergio Arzeni
Director, OECD Centre for Entrepreneurship,
SMEs & Local Development

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The proceedings from the related OECD global conference
"*Enhancing the Role of SMEs in Global Value Chains*"
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# Executive Summary

The globalisation of production has reached an unprecedented extent, with the production of goods and services increasingly fragmented across enterprises and countries. If large and multinational companies (MNEs) of OECD countries clearly lead this process, small and medium-sized enterprises (SMEs) – their traditional partners, suppliers or distributors – are confronted by the diverse opportunities and challenges that arise from the new production context.

Although several aspects of globalisation are now largely understood, notably its main drivers, sparse information is available on the transformation undergoing the relation between large and smaller firms and the evolution of the role of SMEs in global value chains. This study, conducted by the OECD Working Party on SMEs and Entrepreneurship in co-operation with UNCTAD and Swiss academic partners, aims to enlighten this question.

The study collected data through more than 20 country/industry and country/enterprise case studies in five representative industrial sectors, which were selected to illustrate emerging patterns in manufacturing and service sectors where the value chains show a significant presence of independent or affiliate SMEs acting as subcontractors or suppliers. These included the automotive, scientific and precision instruments, software, tourism and cinema industries. The sectoral approach was adopted to take into account that globalisation affects different sectors in different ways and that the role of SMEs varies across sectors.

## *Globalisation of value chains brings opportunities to SMEs*

Overall, the case studies support the argument that the participation in global value chains benefits SMEs. The reorganisation of production at the international level, through increased outsourcing and the development of global value chains, is having significant effects on small and medium-sized suppliers. New niches for the supply of products and services continuously emerge from the fragmentation of production, where small firms can quickly position themselves, exploiting their flexibility and their ability to move fast. Some key benefits include the following:

*Participation in global value chains enhances SME internationalisation and growth.* It provides SME suppliers access to global markets at lower costs than those faced by individual small-scale producers, due to the intermediation function assured by the contractor. Firms that have successfully integrated into one or more value chains have been able to expand their business, and gain stability.

*Small firms that focus on multipurpose technologies have secured their position in the market by becoming specialised suppliers* serving different global value chains, especially in manufacturing sectors such as automotive and precision and scientific instruments. Specialised and niche market SMEs are become conscious

of their competitive strengths, which they associate in particular to the flexibility and quality of their offer (as in the precision and scientific instrument and software industries) or the personalised service (as in the tourism sector). Some of these firms have also succeeded in leveraging key assets from their lead partner, namely reputation.

*SMEs increasingly choose to outsource, even offshore, non-core activities* when this allows them to gain competitiveness from rationalisation of production and optimisation of resources allocation. In many cases, it is the decision to follow the contractor abroad that determines the offshoring strategy of SMEs.

*Co-operation with partners upstream and downstream improves the small firm's efficiency*. This is due to the substantial benefits in terms of information flow, technology transfer and learning opportunities. SMEs confirmed that the exposure to learning processes among partners in global value chains generates knowledge spillovers and stimulates human and technological capital upgrading.

*Innovating and keeping up with new technologies* are seen by SMEs as a requirement for their successful participation in global value chains.

*Globalisation of value chains represents important challenges for SMEs*

The increased opportunities for SMEs come along with serious challenges. Field work has revealed that:

*Awareness and understanding of the structure and dynamics of global value chains by SMEs are generally insufficient, although unequal across firms and sectors.* This seems to be a function of the sector and/or the position of the firm in the chain. Small firms in the automotive sector seem more apt to understand the structure of the value chain to which they contribute than the average SME in other sectors, for which the concept itself of value chain is not always easy to grasp. This is likely related to the complexity of the configuration of the value chain (as in the tourism or cinema industries). The fact that the SME serves very different industries (as is the case of suppliers in the scientific and precision instrument industries) or that it occupies a low position in the chain therefore there is limited knowledge beyond the surrounding environment (as is the case of some SME suppliers in the automotive sector).

*A majority of SMEs across different industries are not able to identify their competitive strengths within the value chain,* nor do they fully understand that this identification is important to optimise their participation in global value chains. Some of the firms interviewed explicitly pointed to the lack of time and resources to understand the evolving global context and devise a market strategy. This, in turn, translates into an insufficient ability to define the adequate business model to gain or reinforce a firm's competitiveness.

*SMEs are mainly concerned with both the inadequate availability of managerial and financial resources, and the inability to upgrade, protect in-house technology, and to innovate.* SMEs stressed that they do not have the critical dimension necessary to support R&D costs and the training of personnel. Lack of working capital is also an obstacle, in particular when faced with delayed payments from international partners.

*Compliance with strict product quality standards required for participation in global value chains is difficult and costly*. SMEs are often dissatisfied with the proliferation of private standards set by contractors and the fact that they differ one from another, alleging that this makes the costs of compliance even more burdensome.

*SMEs want frameworks that assist them to better manage their intellectual assets, including through protection of intellectual property rights when appropriate.* Several SMEs in the automotive and precision instruments industries reported that the current practice requesting complete transparency from sub-contractors on virtually every relevant aspect of their business has facilitated unfair business behaviour, consisting in the contractor passing to lower-cost competitors original designs and plans submitted by SME partners. However, the issue of intellectual property is not to be reduced to one of protection. For some SMEs, in fact, the realisation of value from their innovations comes from selling them to the market instead of keeping them in-house. For this reason, it is the overall management of intellectual assets that SMEs should target.

*To move up the value chain, SMEs need to take up larger and more complex sets of tasks,* which may range from contributing to product development and organising and monitoring the network of sub-suppliers (as in the automotive industry) to introducing organisational or marketing innovations (especially in the tourism and cinema industries). The lack of managerial capacity to deal with the complexity of these tasks, revealed by many SMEs interviewed, plays against their possibility of responding in a timely and effective manner to the challenges of globalisation.

## *Policy conclusions*

As the globalisation of value chains presents both opportunities and challenges for SMEs, the case studies have tried to understand what SMEs expect from governments in the way of support in the evolving environment. The following points emerged:

- Across countries, many enterprises interviewed indicated that governments at the local or national level have provided them with little or no support for facilitating their participation in global value chains. This answer reflects the fact that many SMEs have a limited understanding of the global environment and therefore cannot easily identify policy initiatives facilitating their effective participation in global value chains. For instance, although the area of skill upgrading is certainly one of the most relevant for the successful integration of SMEs in global value chains, SMEs interviewed did not mention programmes in the field of SME training,
- In most of the case studies, two themes dominate SMEs' concerns: the need to improve technology and innovation capacity and the lack of adequate finance and human capital for this process.
- Other important areas include: the capacity to respond to standards and certification requirements; the ability to better manage intellectual assets, including the protection of IPRs when appropriate; the uneven bargaining power SMEs face with large contractors; and the support of diversification in activities to reduce dependence on one or a few customers.

In light of this, Governments could facilitate SMEs' gainful participation in global value chains through policy initiatives in specific areas:

***Raising awareness of the potential of participation in global value chains.*** Many SMEs that are used to serving local markets may find it difficult to gain a good understanding of the advantages and potential of subcontracting. This also applies to the potential for SMEs to subcontract abroad part of their production, in order to improve their competitiveness through rationalisation of resources. Although the diffusion of ICT has made market intelligence easier for SMEs, their limited resources and lack of managerial capacities still hamper accurate information and analysis on the opportunities in foreign markets.

***Increasing participation in global value chains*** through initiatives such as the facilitation of SME consortia for joint marketing or for entering joint bids, particularly in government procurement, or promotion schemes for potential suppliers.

***Supplier financing.*** Gainful participation in value chains often requires substantial investments to acquire or develop superior production technologies and logistics systems, invest in human capital, or certify newly required standards. Moreover, suppliers normally receive incoming payments from their customers several weeks or even months after the delivery of orders, and contract enforcement and collection of payments may be a significant challenge for an SME. Policies aimed at improving SMEs' accounts receivables and facilitating SME financing can help small subcontractors to overcome liquidity problems, *e.g.* by contributing to the development of financial schemes such as factoring.

***Promotion of technological upgrading*** is critical in order for SMEs to capture more value added from participation in global value chains. Policies in this area should aim to support training and capacity building via skill development programmes; to promote partnerships between SMEs and organisations overseas that can develop or transfer technology, products, processes or management practices; and to facilitate the technological upgrading through various financial schemes, such as credit lines for upgrading.

***The lack of protection of intellectual property rights*** of SMEs in international markets has harmful effects on those small subcontractors that experience unfair behaviour by their customers. The negative impact is twofold. In addition to the direct damage created by deceptive business practices, small firms' incentives to innovate may be reduced if appropriation of economic benefits is threatened. Governments should consider including provisions for technology transfer from small subcontractors to MNEs within the context of the OECD Guidelines for Multinational Enterprises. At present, these guidelines only cover the transfer of technology and the need for protection of intellectual property rights of multinational enterprises as it is considered that MNEs are the main conduits of technology transfer across borders (*Section VIII. Science and Technology*, OECD Guidelines for MNEs, Revision 2000).

***Facilitation of compliance procedures.*** The adoption of product and process standards has several well-known benefits for firms. It enables them to introduce new technology and integrate business practices that ameliorate their overall performance. However, different and concurrent standards can become barriers to transmission of information and to trade. Also, the costs of compliance to required standards are proportionally too high for small firms. The problem is aggravated when these firms have to cope with an increasing number of private standards set by customers in addition to mandatory ones. Governments should ensure that

national certification systems do not impose an excessive burden on small firms and encourage SME participation in the standard-setting process. Initiatives such as group certification for small firms in local regions might also prove effective, if trust could be gained in the control mechanisms.

***Promotion of skills development.*** The effectiveness of the aforementioned policy measures, to a certain degree, is contingent on having skilled human resources in SMEs. Participation in global value chains can accelerate SMEs' upgrading of human and technological resources, through technology and knowledge transfer and the implementation of new business practices. Conversely, participation may be demanding, to the extent that a threshold of capabilities could be necessary to successfully enter value chains. Policies that aim at raising technical and managerial skills in SMEs can booster integration of these firms into global chains.

***Attracting foreign direct investment.*** FDI promotion policies may facilitate the integration of firms in global supply chains. Some policies can explicitly be designed to attract MNEs that would promote technology and knowledge transfer to local suppliers and subcontractors, whereas others may aim at helping established foreign affiliates to enter and/or upgrade into higher-value activities. After-care services offered to foreign investors influence the investors' decisions on linkage development.

***Promoting the development of industrial clusters.*** Cluster initiatives allow for economies of scale and agglomeration, and also help develop an experienced local pool of skilled labour and a network of firms cooperating in complementary areas of specialisation. By doing so, they strengthen their competitive advantages in a sustainable manner and become attractive sites for quality FDI. In many cases, the presence of MNEs becomes crucial to integrate clusters into global value chains, and to strengthen their export capacity from the point of view of production and distribution.

***Promoting the development of domestic industries and service networks in developing countries*** that are able to link effectively with international production networks, by promoting entrepreneurship and enhancing competitiveness at firm level through technology and business linkages. This calls for using official development assistance (ODA) more effectively to support developing countries efforts to undertake a wide range of proactive measures to promote trade and investment in an integrated way. To address these challenges at the multilateral level, besides the building of appropriate support for trade policy formulation for WTO accession and the negotiation of bilateral and regional agreements, there is need to enlarge the scope of the Aid for Trade to include support for the development of productive capacity.

# Chapter 1. Introduction

While underway for decades, the globalisation process has recently accelerated, as shown by the substantial growth of world imports and exports since the 1980s and, more recently, of foreign direct investment (FDI). The way production of goods and services is organised has also changed. Most notably, the set of productive activities that leads a product from conception to market is increasingly spread across several enterprises and countries. While the reasons are known why such a complex organisation of production emerged, less evident are the effects that the globalisation of value chains has on small and medium-sized enterprises (SMEs), which are more followers than leaders in this process. This study is concerned with the issue of how globalisation of value chains and of large enterprises affects the role of SMEs as traditional partners, suppliers or distributors for larger firms. It explores the benefits of SME participation in global value chains, the challenges SMEs face, and proposes policy actions when appropriate.

This report is structured as follows: the introduction describes the notion of value chain and value chain analysis and explains the methodology of the study; Chapter 2 presents an overview of the changes in the organisation of production at the world level and identifies, on the basis of the existing literature, the main consequences of the globalisation of value chains for SMEs; Chapter 3 illustrates the main elements characterising the globalisation process in five industries selected for this study; Chapter 4 presents the findings of the case studies carried out in the five industries in several OECD and non-OECD member economies to investigate the degree of awareness, involvement and success of SMEs with respect to the participation in global value chains; and finally, the report concludes by highlighting policy recommendations.

## The notion of the value chain

The phenomenon of globalisation of production can be usefully analysed through the notion of the industry value chain. The value chain model has been extensively used by researchers to map the linkages and networks at the firm and industry level and to analyse where value resides at these two levels. At the firm level, the basic model of Porter (1985) helps determine which specific activities give organisations a competitive advantage and build their value. The activities are divided into *primary activities* (those that enable the firm to fulfil its role in the industry value chain and hence satisfy its customers) and *support activities* (those which are necessary to control and develop the business over time and thereby add value indirectly). The effective management of primary and support activities generates margins for the firm. In other words, the organisation is able to deliver a product/service for which the customer is willing to pay more than the sum of the costs of all activities in the value chain.

The analysis of the value chain at the firm level is meant to investigate the creation of value within the firm, and to identify the points in the internal chain where the value can be more successfully created. An enterprise's value chain for competing in a particular industry is embedded in a larger stream of activities that are referred to in the literature as

the industry value chain. This includes, upward, suppliers and, downward, distribution channels. A company able to manage effectively the entire industry value chain can gain a competitive advantage over its competitors. In light of this, one central issue in the value chain approach is that of value chain 'governance'. This term is used to describe all efforts aimed at systematically reducing any source of uncertainty in supply and demand through the active co-operation of the key actors in the value chain. By reducing uncertainty, information and trade flows are improved and overall costs reduced. However, this also means that some firms in the chain determine and impose the parameters under which others in the chain operate.

The representation of value creation as a chain, *i.e.* a sequence of activities performed one after the other, was essentially based on a manufacturing/retail view of industry. However, this model of the chain is less appropriate to represent an enterprise's activity and its relationships with customers and suppliers in many business sectors, particularly in service industries. Alternative models of value creation, called 'value configurations', have therefore been developed to describe and analyse firm-level value creation across a broad range of industries.[1]

While it is important to understand the purpose of the value creation analysis at the firm level, this study mostly deals with the notion of the value chain at the industry level and uses the term "chain" in a broad sense, by integrating the idea that the creation of value in some business sectors may be depicted by configurations other than a chain, *i.e.* as a network of activities and not a sequence. In this meaning, the notion of value chain permits the analysis of several critical aspects of the phenomenon of globalisation of production: the production process as a set of value-adding activities performed by separate entities; the fragmentation of activities across multiple enterprises and countries; the distribution of productive tasks along the chain; the type of co-ordination between firms in the chain, often involving asymmetry of power and information.

Also, the notion of a value chain highlights one specific aspect of the links between firms, which is the economic linkage of value addition in the full range of activities that are required to bring a product from its conception to its end use. Indeed value addition is key. It is mainly the pursuit of those productive activities with the highest return that make lead firms in the value chain decide on which activities to keep in-house and which to outsource. The distribution of tasks and the positioning of firms along the chain at stages corresponding to low or high value activities are largely determined by lead firms, and small firms rarely act as the lead firms of the chain.

**Box 1.1. Value chain analysis: A tool for understanding competitiveness**

The value chain model provides a tool to analyse sources of competitiveness at the firm and industry level. In the automotive sector, for instance, a company entering a value chain will initially begin by producing automotive parts based on blueprints received from companies higher up the chain. However, simply manufacturing automotive components does not have a high degree of value added. With time, the company should therefore acquire adequate skills in product development and design in order to specialise in activities within the chain that have more value added.

## Methodology of the study

A sectoral approach was adopted to take into account that globalisation affects different sectors in different ways and that the role of SMEs varies across sectors. The project identified five representative industrial sectors to be analysed through country/industry and enterprise/country case studies. The five industries, which were selected to illustrate emerging patterns in manufacturing and service sectors where the value chains show a significant presence of independent or affiliate SMEs acting as subcontractors or suppliers, included:

Two manufacturing industries:

- *The automotive industry:* this industry has changed dramatically during the past 20 years, in particular as concerns the suppliers and distribution networks, where many SMEs used to play a an important role.
- *Precision and scientific instruments industry*: medium-sized enterprises in this industry still play a rather important role. However, as the markets are becoming more and more global the industry moves towards the provision of packages of "services-and-products" and the strategic role of large global players seems to increase.

Two service industries:

- *The tourism industry:* this industry has become global, with its major players extending their cooperation to reach small or medium sized local players (franchising, management contracts, global reservation systems, branding). The study covered several segments, namely the hotel industry, the tour operator industry, and the travel agency industry.
- *The software industry*: this is a recent industry and yet one of the most globalised, subject to rapid and fundamental changes in production and distribution. Along with large and multinational firms, SMEs have an important role in the market, including providing support tools and a constant flow of independent ideas and concepts.

One creative/entertainment industry:

- *The film production and distribution industry*: in this industry the complementarity between the content providers and the distribution channels is crucial. The methods of collaboration of these two sets of enterprises, their relative sizes and strategic strengths have changed dramatically with the spread of digital and telecommunications technologies in the 1990s.

Data for this project were gathered from two main sources: structured interviews with a limited number of large enterprises and their upstream and downstream partners for each of the selected industries; and country studies conducted through semi-structured interviews based on a questionnaire with a representative group of SMEs in the selected industries that explicitly or implicitly act as suppliers and/or distributors in global value chains. Overall, *the project undertook seventeen country/industry case studies and seven in-depth enterprise case studies.* The latter were co-ordinated by UNCTAD and included Colombia, Egypt, India, Mexico, Nigeria and South Africa. Table 1.1 shows the distribution of case studies by country and industry, while the list of case studies is presented in Annex A.

**Table 1.1.Breakdown of case studies by industry and country**

| Manufacturing | | Services | | Creative industries | |
|---|---|---|---|---|---|
| Automotive | Australia<br>Chinese Taipei<br>Japan<br>Spain<br>Turkey<br>India: Tata Motor<br>Mexico: Volkswagen<br>South Africa: Toyota | Tourism | Australia<br>Austria<br>German/Jordan<br>Korea<br>Poland<br>Spain (Andalusia)<br>Spain (Balearic Islands)<br>Switzerland | Film production and distribution | Korea<br>United States<br>Colombia: RCN and Caracol<br>Nigeria: Nu Metro |
| Precision and scientific instruments | Australia | Software | Turkey<br>Egypt: Microsoft | | |

A reasonable level of homogeneity of the case studies was ensured through the use of the same questionnaire for the semi-structured interviews. In particular, the following core set of questions was put to the interviewees: *the awareness and understanding of the global value chains and its participants*; *the co-operation within the global value chains and linkages*; *the relevance of technological skill, standards and intellectual property rights*; and *the role expected from government*. As an additional precaution, the analysis of the findings has taken into account the following differences:

- *Research team*: The case studies have been carried out by researchers belonging to different types of institutions, namely ministries, universities, research institutes, and consultancies.
- *Country and sector*: The background context of each case study is determined by the specific conditions in the country and sector of reference.
- *Coverage/sample:* The number of firms interviewed for each case study varies from a few tens to a few hundred, although the average is around 20 enterprises. The criteria for the selection of the enterprises, however, were always based on the representativeness of the selected firms in the sector.
- *Period of time:* The case studies were completed in different periods of time, between July 2005 and April 2007.

The case study approach used for this project facilitated a greater understanding of the issues investigated and provided fresh insights on them. It is important to remember that the generalisation of conclusions from case study research requires due care.[2]

# Notes

1. Stabell and Fjelstad (1998) developed two alternative value *configuration* models as an addition to Porter's value chain model: value workshop and value network, describing respectively problem solving activities (for example, advertising agencies and professional services organisations) and contact establishing, intermediary and disseminating activities (such as insurance companies, banks, telecommunications companies and airlines).

2. Yin (1994) presents a thorough discussion of the issue of generalisation of case studies findings.

# Chapter 2. Production in Global Value Chains

The globalisation of value chains has changed the way production is organised and has provoked important modifications in the relationships between partners along the value chain. This form of globalisation was determined mainly by the search for efficiency, which includes sourcing inputs from low cost or more efficient producers), the entry in new and growing markets, and the search for complementary and strategic assets. During the past two decades, the organisation of production has therefore undergone a dramatic evolution that has led to new forms of industrial and enterprise organisation on a worldwide basis. Despite the phenomenon being well acknowledged, it is still difficult to measure the extent of the globalisation of value chains. Evidence of this has been observed through indicators of economic globalisation, and notably in the increase of the share of intra-firm exports of affiliates under foreign control, the ratio of imported to domestic sourcing of inputs, and the export and import propensity of affiliates under foreign control in the manufacturing sector (OECD, 2007).

## The phenomenon and its drivers

The driving forces of the globalisation of value chains are several, including increased competition, technological progress, especially information and communications technologies (ICTs) development, improved transport facilities, and availability of a large base of low-cost suppliers in areas of the world that experience rapid growth, in particular China and India. In response to these forces and the combined effect of market liberalisation and deregulation, firms have radically changed their business strategies. Multinational enterprises (MNEs) have largely been the source of much of this strategic change towards new organisational forms. Once dominant, the vertical integration model of production has become one among several forms of production organisation that span from mergers and acquisitions, joint ventures, strategic alliances and a variety of co-operative relations. On the basis of empirical studies, many scholars argue that buyer-supplier relations in value chains are increasingly arranged through quasi-hierarchical relationships, which are replacing trade-based and market-based transactions (Gereffi *et al.*, 2005).

Adapting to competitive pressures has implied an increase in the outsourcing of activities. To improve their competitiveness, firms concentrate on core competencies and activities with the highest added value, and outsource non-core activities. Outsourcing of manufacturing tasks, including outsourcing abroad, started long before that of services. Indeed, since more and more countries have developed their industrial capabilities, barriers to entry in manufacturing have consequently fallen and the competitive pressures have heightened. Today, the primary economic returns in the chain of production are typically found in areas outside manufacturing, such as design, branding and marketing, and this has influenced the choice to outsource manufacturing tasks.

Several recent events have reinforced the scope for outsourcing activities and, especially, offshoring them. One of these is the reduction of tariffs in outward processing

trade, which has rendered manufacturing offshore for the home market highly attractive. For many years now, OECD manufacturers have sourced components from other countries, including non-OECD economies. A large base of suppliers has emerged in many non-OECD economies, with China and India having a central role in the panorama of emerging players for their exceptional industrial capacity. Despite geographical distances, improved transport facilities have rendered the outsourcing of production economically feasible. The significant development of product standards has also represented a factor facilitating outsourcing, opening opportunities for competitive SMEs located in different parts of the world.

Some other well-acknowledged factors are the important developments in ICTs, which together with the liberalisation of trade in services have made possible the sourcing, and when feasible the international outsourcing, of numerous service activities based on "knowledge work" such as data entry and information processing services, research and consultancy services or services that can be easily carried out through ICT-enabled service provision such as call centres (Van Welsum and Vickery, 2004).

Moreover, the scope for service offshoring is augmented by the fact that business services represent a larger share of production costs. This increases the pressure to seek lower-cost solutions for their provision. Finally, the ICT and related skills shortages experienced in many OECD countries in the late 1990s (Van Welsum and Vickery, 2004) and considerations concerning taxation (Gage and Lesher, 2005) provide additional reasons for service offshoring.

A much less discussed determinant in the choice of offshoring, and of organisational changes in general, is the role of finance. Ponte (2003) has argued that the "pressures on enterprises' boards to maximise shareholder value have been one main factor entailing restructuring operations, externalising non-core activities, re-engineering supply chains to match a set of financial indicators, most importantly the ratio of post-tax return on capital employed".[1] This pressure has brought about a shift from competitive strategies based on maximising the market share to strategies aimed at maximising financial performance.

### Box 2.1. Outsourcing and subcontracting

Firms can source activities to affiliate companies (in-house sourcing), or outsource them to external suppliers. In both these cases, they can refer to firms domestically or abroad (offshoring) (see Van Welsum and Vickery, 2004, for a representation of sourcing in terms of a matrix of location and control).

Subcontracting corresponds to production outside the enterprise. It takes place between non-affiliate firms, although often in a relationship of co-operation or partnership. In the case it occurs outside the country of the contractor, this involves foreign subcontracting (offshore outsourcing or subcontracting abroad). According to the definition in the OECD Handbook of Economic Globalisation Indicators, "subcontracting occurs when one firm, the prime manufacturer or contractor (principal), contracts with another firm, the subcontracting or supplier, for a given production cycle, one or more aspects of product design, processing or manufacture, or construction or maintenance work. The supplier must adhere strictly to the contractor's technical or commercial specifications for the products or services in question". Also, the same firm can be a subcontractor for some customers and a prime contractor for other, smaller firms.

Subcontracting abroad does not involve direct investment, while the transfer of production abroad (called "relocation") through affiliates companies implies FDI.

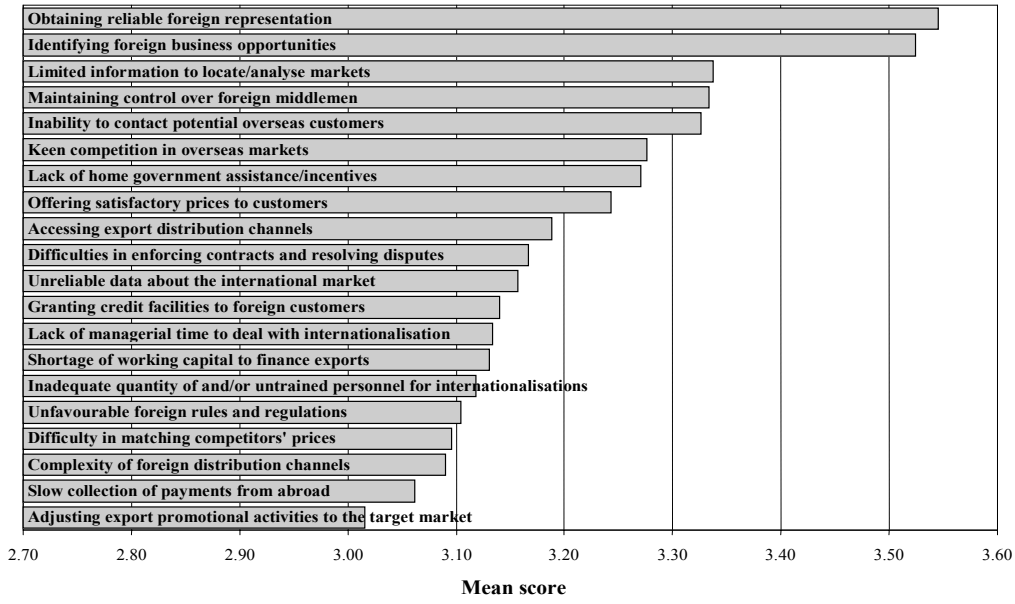
*Source*: OECD Handbook of Economic Globalisation Indicators, 2005.

Today, the phenomenon of offshore outsourcing is at the centre of an economic and social debate and a matter of concern for workers in OECD countries. Although little empirical evidence is available so far in showing the actual dimension of offshoring of IT or ICT-enabled services, service offshoring has raised a case for policy intervention (Brainard and Litan, 2004). While the costs, in terms of employment, are at the core of the debate on outsourcing, the benefits derived by increased firms' competitiveness in OECD countries and price reductions for consumers are not completely acknowledged. This is, in part, due to the fact that the cause-effect relationship is less evident and also because of the delay with which the benefits may become manifest (Hatzichronoglou, 2007).

## Opportunities for SMEs

SME participation in global value chains has to be placed in the broader context of SME internationalisation. The reorganisation of production at the international level and the development of global value chains are having significant effects on SMEs, in particular by expanding their business opportunities. In general, reaching international markets is a problematic step for SMEs. A recent OECD-APEC survey, carried out in the context of the study "Removing Barriers to SME Access to International Markets", investigated the type and intensity of barriers in accessing international markets perceived by SMEs. The survey found that these firms feel that their full participation in the globalisation process is hampered by numerous internal and external obstacles (Figure 2.1).

**Figure 2.1. Obstacles to internationalisation as perceived by SMEs**




*Note:* SME Survey carried out between January and July 2006. Responses received from a total of 978 SMEs in OECD and APEC economies, with a high degree of concentration within just seven OECD member countries: Canada, Greece, Switzerland, Turkey, Japan, Spain and New Zealand. Barriers are ranked using the Likert-Scale ranking method, from 5 (very significant) to 1 (not significant).

*Source:* OECD WPSMEE (2006), "Removing Barriers to SME Access to International Markets".

It seems that SMEs consider their internal capabilities and resources as inadequate, and lack self-confidence in approaching international markets, as expressed by their perceptions of obstacles such as difficulty in identifying foreign business opportunities, maintaining control over foreign middlemen or accessing export distribution channels.

In particular, in developing countries, only a limited number of SMEs are well prepared for the new conditions and increased competition encountered in global markets, thus limiting those who benefit from the opportunities opened up by globalisation (UNCTAD, 2005). On the contrary, trade liberalisation increases the ability of well-established foreign manufacturers and retailers to penetrate remote and underdeveloped markets, and makes it increasingly difficult for SMEs in developing countries to survive or at least maintain their business position in the local and, if applicable, global market. An emerging opportunity to reap the potential benefits of global trade is represented by the integration of SMEs into global chains of production at various stages of added value, through the establishment of linkages with larger firms and foreign affiliates. These linkages may represent the way for the SME sector, or at least for the segment with the highest growth potential, to access a series of missing critical resources, the most important of which are access to international markets, finance, technology, management skills and knowledge, and to engage in a mutually beneficial relationship. In this respect, it is worthwhile noting that in the past developing countries have succeeded in complex industrial exports without going through MNE networks, by building the necessary indigenous base of technological capabilities. However, the changing international context and the growing role of MNEs in production and trade suggest that much of the growth of exports in the future will be situated in or around MNE production systems (UNCTAD, 2004).

### *Accessing new markets, entering new product and service niches*

In both industrialised and developing countries, two phenomena have characterised the past decades and contrasted the impact of actual or perceived barriers to SME access to international markets. First, the use of ICT-technologies and related services and improved transport facilities have importantly contributed to overcome SME isolation and ease small firms' access to markets well beyond national boundaries. Previous OECD work, which analysed the extent of diffusion and uptake of ICT technologies among SMEs, highlighted the benefits of ICT use for these firms in terms of extending their network of business partners and reaching new customers with greater ease and at lower costs (OECD, 2000).

Second, the fragmentation of production together with the development of ICT-technologies creates new entrepreneurial possibilities for SMEs. New niches for the supply of novel products and services continuously emerge where the small firms can position themselves, exploiting their flexibility and their ability to move quickly. Small firms with quality tangible and intangible assets, such as niche products and advanced technologies, are becoming partners in international strategic alliances, targets of cross-border mergers and acquisitions, specialised suppliers to MNEs, and participants in actual and virtual business networks on a global level (Sakai, 2002). In manufacturing sectors such as automotive and precision and scientific instruments, small firms which focus on multipurpose technologies have secured their position in the market by becoming specialised suppliers serving different global value chains.

The considerable spreading of subcontracting has benefited SMEs. It has opened business opportunities and brought more stability in the volume of work. Participating in

global value chains as subcontractors also provides indirect access to global markets at lower costs than those faced by individual small-scale producers, due to the intermediary role assured by the contractor. Another advantage is exposure to learning processes among partners in global production networks (for instance, from the dissemination of business concepts) and this offers possibilities for human and technological capital upgrading. Although subcontracting *per se* does not necessarily imply much co-operation between the two parties, some tasks do demand a significant amount of co-operation in order to be fulfilled.

There are different profiles of subcontractors (Box 2.2), with an important phenomenon being the increasing complexity of tasks required from subcontractors in several industrial sectors. The evolution in subcontracting relationships between large firms and their smaller counterparts in recent decades is illustrated in Figure 2.2, with reference to Japanese firms.

### Box 2.2. Subcontractors

Different profiles of subcontractors can be identified in particular on the basis of their production capabilities. OECD (2005) and Hatzichronoglou (2005) distinguish two main categories of subcontracting that give rise to different relations between prime contractors and suppliers.

The first category concerns relatively commonplace goods and services with a low technological content (*e.g.* call centres, catering, intermediate inputs for various kinds of machinery, etc.). Because the base of suppliers in this category is wide, prime contractors can exert strong pressure on prices and delivery times, and replace their subcontractors relatively easily.

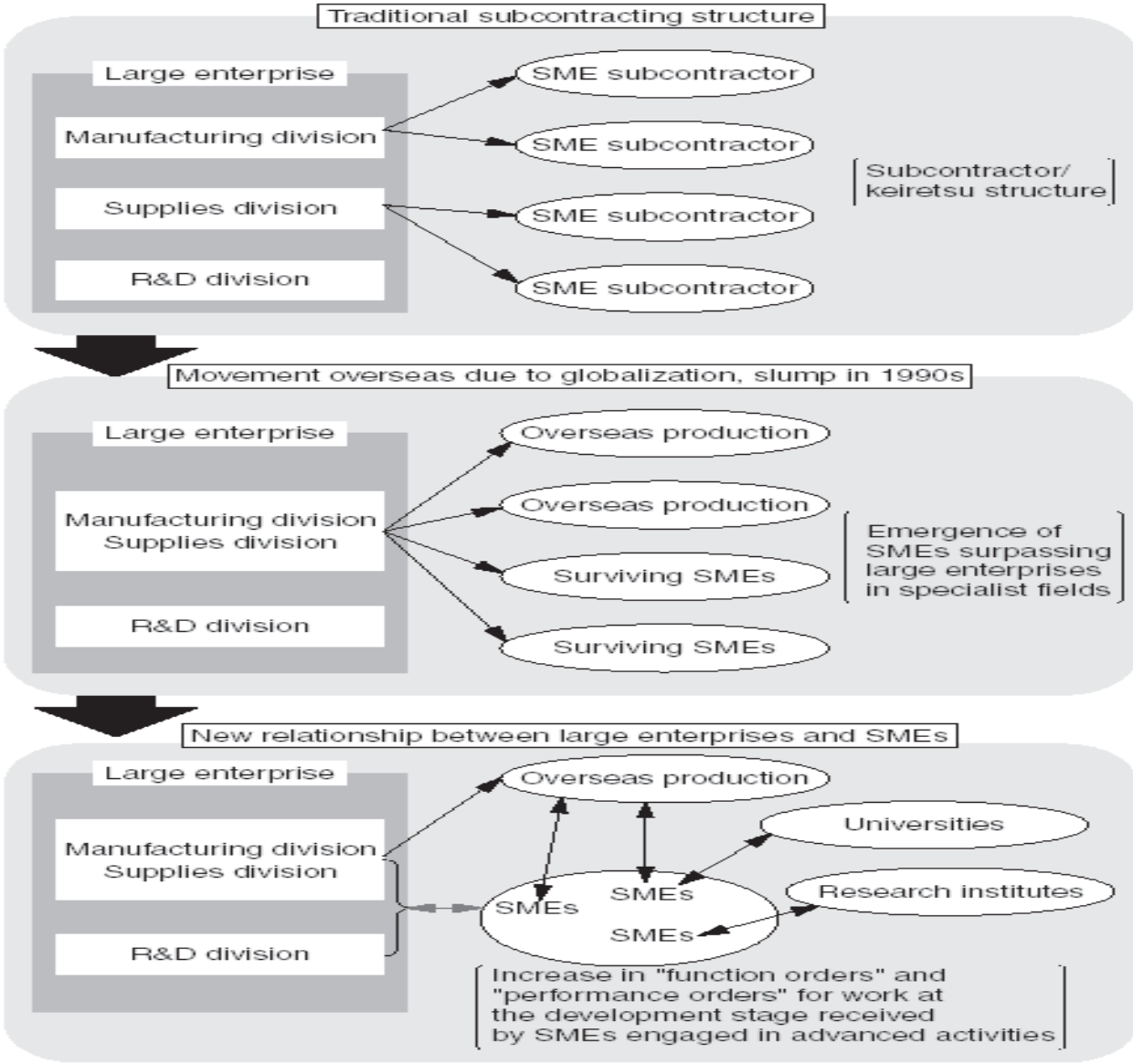
The second category involves goods and services with a high technological content, and that are generally the subject of constant innovation. Suppliers in the second category are more closely associated with the design of the products, and thus assume a role similar to that of a partner. A typical example of this type of subcontracting (also called "subcontracting partnership") are the relations between automobile or aircraft manufacturers and their respective parts suppliers. Both these cases generally involve high-tech goods for which suppliers cannot be mere executing agents but must also participate in the design of products and monitoring technological developments, sometimes even imposing certain innovations on the prime contractors. For this reason, contractors in the second category are much more dependent on their subcontractors than prime contractors in the first category.

Despite the close links that might tie prime contractors and their subcontractors, especially in the case of high-tech goods, their relationships differ from co-operation agreements. In co-operation agreements, partners often establish financial links between them (mutual capital investment) and seek through their co-operation to share costs and risks, notably in research and development, or they undertake co-operation to jointly develop a new technology.

*Source*: OECD Handbook of Economic Globalisation Indicators, 2005.

**Electronic marketplaces:** Electronic B2B marketplaces are a tool used by large and multinational firms to manage orders to suppliers and subcontractors and the flow of information with them. They can be vertically focused on particular industries, or they can be horizontally focused to provide goods and support services across a wide variety of industries. During the past decade, many large companies have set up their own electronic trading platforms to procure goods and services, while others are using third party e-marketplaces. For all of these firms, the objective is to better control their supply chain and rationalise cost and information at each stage of the chain.

**Figure 2.2. Changes in subcontracting structure, Japan**




*Source*: Japan Small Business Research Institute (JSRBI) 2005 White Paper of Small and Medium Enterprises in Japan.

The use of e-marketplaces seems to be predominantly buyer driven. SMEs are under increasing pressure to use e-marketplaces as a condition to continue supplying their traditional customers. SMEs have to partake in reverse auctions[2] using their customers' e-marketplace, but they find it difficult to assess whether the buyers' priority is reducing the price level or gaining efficiency in terms of improved process time. Evidence on the outcomes from participation in auctions and SMEs' perception of this tool is mixed. Some suppliers consider e-marketplaces as tools for the buyers to limit prices by looking for new suppliers (Kjølseth, 2005). This is consistent with another finding of recent research in this area, namely that buyers are often not willing to invite suppliers with whom they already have a long-term relationship to e-marketplaces. However, there is also evidence that a very large share of online auctions is awarded to the existing

supplier. Also on the positive side, some SMEs recognise that participation in e-marketplaces has allowed them to increase their global exposure and to secure contracts that they otherwise may not had received.

**Box 2.3. Electronic marketplaces: the case of Covisint**

In the automotive industry, the suppliers face increasing collaborative pressures to develop the ability to manage project-based co-operation and provide leading-edge technology, particularly first tier suppliers who are taking over from Original Equipment Manufacturers (OEMs) the responsibility for systems integration and the management of the supply chain.

Electronic Data Interchange (EDI), launched more than 30 years ago, was the first step of the automotive industry to closer collaboration with its suppliers by means of inter-organisational systems. Until the advent of open, cheap and flexible standard based Internet-related technologies during the late 1990s, EDI was the dominant standard in the area of B2B e-commerce. However, the high costs associated with the implementation and use of EDI meant that only large suppliers became involved in this system. During the late 1990s, the automotive industry launched a strategic programme to ensure the networking of the entire value chain beyond the company's boundaries, with the final objective of integrating all the specific applications into a global supplier portal. This would have not only reduced costs but also increased the efficiency of information and data exchange, taking advantage of leading-edge technology. In 2000, an Internet hub called Covisint was created by large OEMs such as GM, Ford and DaimlerChrysler and software companies such as Oracle.

The founders' aim was to connect the automotive industry to a global exchange marketplace by streamlining the business processes of all participants and enabling them to collaborate "seamlessly" across organisations' borders. The reaction of suppliers was not what was expected. Indeed, despite the acclaimed aim of Covisint to reduce costs and risks across the industry, SMEs felt that only the requirements and vision of the large OEMs were taken into account in the development phase, and not that of the entire industry.

*Source*: Gerst *et al.*, 2005.

Overall, SMEs are still reluctant to use e-marketplaces, partly due to a lack of awareness, although many real barriers may also prevent them from fuller participation. According to recent research, SMEs find it difficult to judge which of the many e-marketplaces to trust and how one type of e-marketplace distinguishes itself from another (for instance, vertical versus horizontal e-marketplaces) (European Commission, 2002; Kjølseth, 2005). Different standard requirements for products and services are another obstacle since this raises the entry cost to participate in different e-marketplaces, which can be already relatively high for small firms. Finally, many small firms are worried about unfair business practices such as price fixing in online auctions.

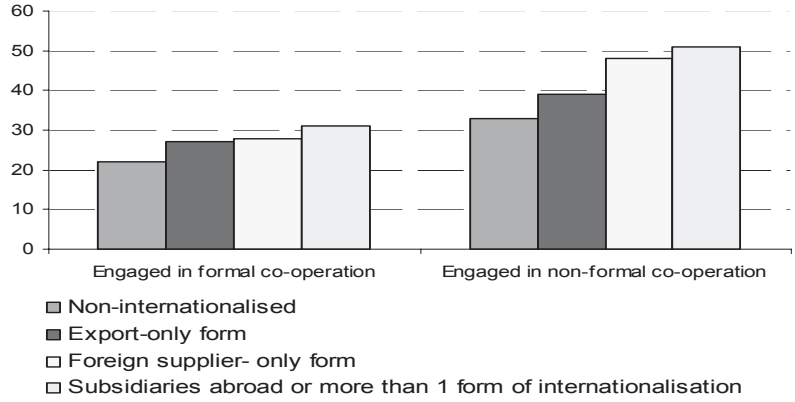
### *Rationalising production: offshore outsourcing and acquisition of strategic assets*

With the development of ICT technologies and the emergence of a global supplier base, outsourcing, including offshore outsourcing, has become a viable option also for small firms. As common with large firms, SMEs increasingly choose to outsource tasks when this allows them to gain competitiveness from the rationalisation of production and the optimisation of resource allocation. In many cases, it is the decision to follow the contractors abroad that determines the offshoring strategy. While difficult to measure, the increased recourse to outsourcing and offshoring by SMEs has been recorded in recent SME surveys (2003 Observatory on European SMEs; and Japan's 2004 and 2006 White Paper on SMEs). Recent studies from UNCTAD (2005) revealed that even SMEs in

developing countries and economies in transition increasingly try to enhance their competitiveness through FDI that provides them with access to strategic assets, technology, skills, natural resources and international markets.

A European survey carried out in 2003 found that more than one third of the surveyed SMEs with subsidiaries abroad had no exports (European Commission, ENRS Survey 2003). This suggests that the creation of foreign subsidiaries by SMEs is not always intended as a sales platform for the company's products but can also be a platform for accessing cheap labour (*e.g.* via sub-suppliers) or accessing knowledge and technology. The survey findings also indicated that internationalised SMEs are more prone to co-operation whether by formal (such as agreement or contract) or informal terms with other firms, both domestically and abroad, as compared to other non-internationalised small firms (Figures 2.3 and 2.4).

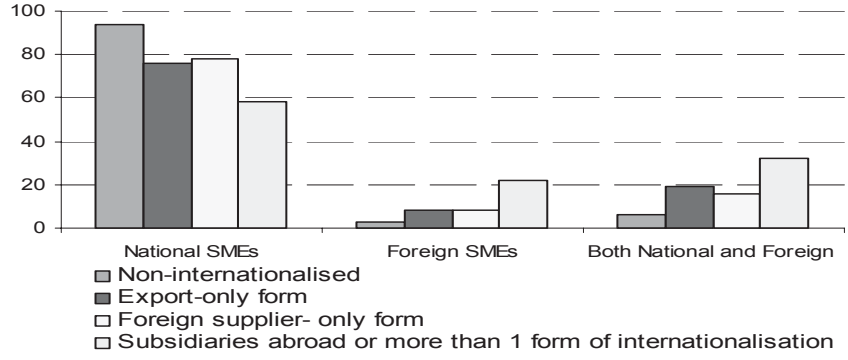
**Figure 2.3. SMEs in formal and non-formal co-operation**




*Note*: The ENRS survey groups the surveyed SMEs according to the following forms of internationalisation: 1. foreign supplier (importing) as the only form of internationalisation; 2. Exporting as the only form of internationalisation; 3. Subsidiaries, branches and joint ventures abroad, or a combination of more than one form of internationalisation. The figure shows percentages for each typology.

*Source*: EC, ENRS Enterprise Survey 2003.

**Figure 2.4. National or foreign SMEs as important partners in co-operation**

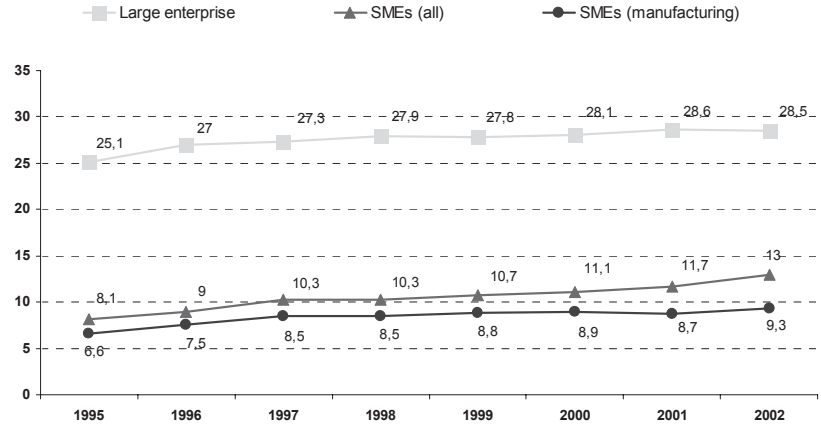



*Note*: The ENRS survey groups the surveyed SMEs according to the following forms of internationalisation: 1. foreign supplier (importing) as the only form of internationalisation; 2. Exporting as the only form of internationalisation; 3. Subsidiaries, branches and joint ventures abroad, or a combination of more than one form of internationalisation. The figure shows percentages for each typology.

*Source*: EC, ENRS Enterprise Survey 2003.

In Japan, the proportion of SMEs with overseas subsidiaries has increased constantly since the beginning of the 1990s, in particular in manufacturing (Figure 2.5). The purposes of establishing subsidiaries change according to region, with sourcing cheap products and cutting costs being the first reason in China and in newly industrialising economies (Hong Kong, Chinese Taipei and Korea). At the same time, the increase in foreign direct investment has also been accompanied by a rise in the number of withdrawn overseas subsidiaries of SMEs, with a higher share of withdrawal for joint-ventures than for independent ventures. This is probably a sign of the difficulties SMEs encounter in managing operations outside their domestic market (OECD, 2005a).

**Figure 2.5. Proportion of Japanese companies with overseas subsidiaries**




*Source*: Japan's 2004 White Paper on SMEs.

Typically, small firms estimate that the savings associated with offshore sourcing are likely to be outweighed by the cost and risk of establishing an offshore operation. The difficulty of managing outsourcing of activities in countries with different languages and cultures may represent a barrier to SMEs. Despite these problems, recent empirical evidence showed that SMEs can be successful in outsourcing abroad (Value Leadership Group, 2005). These SMEs have adopted an overall strategy with respect to outsourcing that goes beyond cost cutting. Indeed it is not easy to gain a competitive advantage based solely on a cost advantage, because competitors soon or later are forced to follow an offshore strategy. SMEs that have been successful are those that choose overseas partners with complementary competencies and a qualified labour force, thus adding their comparative advantage at home and that of their partners. Among European IT SMEs, those successful in outsourcing offshore marked a step towards restructuring the firm's business model that allowed it to stay in the market and even remain competitive.

## Challenges for SMEs

Overall, the globalisation of value chains constitutes a major challenge for small and medium-sized subcontractors use to serving local and national markets. Even when SMEs do not follow their contractors in international markets but stay at home, they still feel compelled to conform to those international standards for technology, quality, delivery and after sales service that evolve in their industry. Also, small subcontractors have to adapt routines and practices developed at the local and or/cluster level to managerial practices set by international buyers.

Also, network relationships have gained importance in global value chains (GVCs) as a mechanism of co-ordination between firms, whereas co-ordination was once more polarised between market-based relationship on one side and vertical integration (where a firm segments its activities along a number of domestic or foreign affiliate companies) on the other. The critical feature is that this type of relationship between a firm and its suppliers is not based on ownership, but nevertheless implies a degree of co-ordination which can be very high. Network relationships comprise a spectrum of possibilities going from low to high levels of co-ordination and power asymmetry between buyers and suppliers.[3] Relying on factors such as the ownership of brand names, proprietary technology, or the exclusive information about different product markets, lead firms act as governors of the chain by setting the conditions of the participation of the other agents in the chain. These would include, typically, process and product standards, quantity and terms of delivery (Humphrey and Schmitz, 2004).

For an increasing part of manufactured and semi-manufactured goods and services with a medium to low technological content, contractors have now a large base of suppliers available. For these products, the costs of changing suppliers are not high as compared with the situation for non-standard and high-tech products that are associated with a degree of specialisation and customisation that increases agency costs. Evidence suggest that many SMEs in OECD countries have registered a decrease in the orders by their main buyers that choose to subcontract abroad where lower cost conditions can be found (see, for instance, Japan's 2005 White Paper on SMEs). For some small companies, this has implied the closure of their business.

The parallel phenomenon of increased outsourcing of customised inputs or services, for which agency costs are an issue, raises a different range of problems. In some cases, a supplier may need to make significant investment to develop relationship-specific assets necessary for the transaction. For instance, a part that a seller customises for a particular buyer is a specific commodity and any investment that the seller must undertake specifically as a result of the customisation is a relationship specific asset. The need for relationship-specific investments in different global value chains might create a situation where some suppliers, especially small firms, become captive to the buyer. In France, 85% of the respondents to a survey of subcontractors in the automotive sector declared to be unsatisfied with the prevailing market prices, which they consider as too low (Usine Nouvelle, 2006). They reported that the cost reduction asked by contractors has been between 10% over one year and 20% over three years.

In other cases, a firm's participation in a global value chain might imply downgrading its functions in order to respond to the conditions imposed by the lead firm. For example, SMEs in one of the most reputed Italian shoe clusters have accepted to focus only on manufacturing and abandon conception and design tasks (Rabellotti, 2003). Although these firms succeeded in remaining competitive in the global market compared to other competitors, the effects of the functional downgrading in the medium and long term need to be evaluated, in particular if this is associated with loss of local skills.

This problem illustrates the difficult choices that the SME may have to face when exposed to the international market. The market structure on the international stage may not necessarily be the same as at home. For example, at home, the SME may be a supplier to a market of many similarly sized buyers. However, with international exposure comes possible entrance into an oligopolistic or monopolistic market (*e.g.* Wal-Mart and its suppliers). While the decision not to sell to the dominant buyers in these markets may mean a substantial loss in potential sales and profits, the decision to deal with the

dominant buyers can result in reduced profit margins due to asymmetries in contract negotiation and a loss of control in production decisions.

### *Supplier financing*

The participation of small firms in global chains is also challenged by the fact that these firms may find it difficult to finance their production cycle, since after goods are delivered most buyers demand 30 to 90 days for payment. Specific financial tools such as "factoring" and "reverse factoring"[4] have been created to provide financing to small suppliers. In Mexico, the Mexican Development Bank has promoted a supplier financing programme based on reverse factoring, which links large private and public companies and their SME suppliers (Box 2.4).

**Box 2.4. Providing financing to small suppliers**

In March 2003, the Inter-American Investment Corporation (IIC) signed an agreement committing USD 20 million to a guarantee programme for supply chain financing with Nacional Financiera (NAFIN), Mexico's largest state development bank, which is active in providing financing to small enterprises that supply goods and services to public sector agencies and first-tier companies.

The guarantee programme intends to channel up to USD 200 000 per beneficiary to small suppliers of first-tier companies operating in a variety of productive sectors throughout Mexico. The programme is expected to reach between 500 and 800 beneficiaries during its projected seven-year life. Accordingly, the programme should contribute to the creation of an estimated 2 500 to 4 000 jobs, in addition to generating annual export revenue valued at between USD 15 million and USD 25 million.

*Source*: IDB –IIC website

### *Developing countries' perspective*

In developing countries, local component firms are finding it increasingly difficult to withstand the pressures of global sourcing. The pervasive pressure on MNEs to reduce their number of suppliers has the effect of removing many developing countries SMEs from the supply chain. In producer-driven GVCs, in particular in the automotive, capital goods and electronics industries, this is the source of continuously declining local ownership. For example, data show that the auto component sector is uniformly changing, 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 (Kaplinski, 2004). In this case, the challenge for an SME is typically how to engage with second- or third-tier suppliers, as first-tier suppliers are usually large multinationals in their own right.

The company case studies carried out in the automotive sector in India and South Africa show that large opportunities in second-tier sourcing have consistently emerged. To a large degree, independent local suppliers seem not to have managed to either link with global sourcing partners or build their own capabilities and resources to become a global sourcing partner. On the other hand, developing countries' SMEs are increasingly working with global sourcing intermediaries that operate as first-tier suppliers of large MNEs. In this respect, there is a strong and urgent need to upgrade local suppliers and respond to the expectations of MNEs in terms of product quality standards, supply standards and delivery times. Suppliers to Toyota in South Africa, for example, agreed that mere proximity to the local plant, the ability to produce a component according to a

supplier specification and a history of relationship does not necessarily guarantee an ongoing relationship with Toyota (UNCTAD, 2006).

Today, in developed and developing countries it is critical that firms meet specifications in international standards and systems and provide their own technology offering or that of a strategic partner in meeting future production demand. The quality of the relationship between international contractors and their partners and suppliers is also crucial. In some developing countries, specific programmes have been set up to facilitate SME integration in global value chains, building on the linkages between MNEs and SMEs (Box 2.5).

### Box 2.5. Facing the challenge of global value chains: SMEs in developing countries

The establishment of sustainable linkages between SMEs and MNEs is one of the most effective ways to integrate domestic suppliers into GVCs. Not all developing countries, however, have been successful in promoting such linkages, and in embedding foreign firms into the local economy in the long term. The analysis of successful business linkage programmes shows that building linkages is dependent on the broader economic, social and cultural environment. Additionally, it shows that the creation of SME-MNE linkages is neither easy nor automatic, and that in developing countries a systemic policy approach to linkage building has produced positive results.

For example, the main objective of the business linkage promotion programme in Uganda is to promote the creation of durable and mutually beneficial partnerships between MNE affiliates and large local companies on the one hand, and SMEs on the other, so as to enhance the productive capacity, efficiency, competitiveness and sustainability of their relationships. The programme is being implemented by a Business Development Services Centre as lead facilitator, namely Enterprise Uganda, in collaboration with the Uganda Investment Authority (UIA) and supported by UNDP, UNCTAD, and the Government of Sweden.

The key role of each partner is as follows: Enterprise Uganda identifies SMEs and brokers and facilitates implementation of business linkage deals and defines SMEs' capacity gaps. It also ensures the transfer of technology and know-how including coaching and mentoring of SMEs by MNEs, and facilitates access to markets and finance. The Uganda Investment Authority contributes to the improvement of the business policy environment and facilitates the initial brokering of the linkages with the MNEs.

The project so far demonstrates that in spite of the productive capacity constraints of SMEs, MNEs were ready to upgrade their business relationships with SMEs into long-term relationships, provided SMEs committed themselves to remedying shortcomings in their business systems, and upgrading their skills. Since its inception in 2005, the project achieved the following results:

- An agreement has been signed with Uganda Breweries, which will assist in the upgrading of the members of the barley growers' association in Eastern Uganda, to benefit over 2 000 farmers.
- In Western Uganda, Kinyara Sugar Works Limited under Booker Tate signed an agreement to strengthen its link with Kinyara Sugarcane Growers Limited, thereby benefiting about 2 500 local farmers.
- In the telecommunications sector, two telephone companies have signed up to upgrade their distributor network.
- In the real estate sector, the country's biggest real estate developer has signed an agreement to support 15 local suppliers.

*Source*: UNCTAD, Developing Business Linkages, 2006

# Notes

1. Ponte (2003) makes the example of roasters (the lead firms in the coffee value chain): the firms that are quoted in the stock exchange will be under pressure to externalise inventory management to reduce stockholding, while those privately-owned may find it profitable to hold stock. This may explain different organisational forms of firms that are at the same point of a value chain.

2. A reverse auction is an electronic auction where suppliers bid online against each other for contracts against a published specification.

3. Gereffi *et al.* (2005) observe the emergence of networks as a predominant form of co-ordination (or governance) between firms in value chains; they distinguish, in particular, three types of network relationships: modular, relational, and captive.

4. Factoring is a type of supplier financing in which firms sell their credit-worthy accounts receivable at a discount (equal to interest plus service fees) and receive immediate cash. There is no debt repayment and no additional liabilities on the firm's balance sheet, although it provides working capital financing. Factoring is not a loan but a comprehensive financial service that includes credit protection, accounts receivable bookkeeping, collection services and financing. In reverse factoring, the lender purchases account only receivable from high-quality buyers (*i.e.* large internationally accredited firms) so that the credit risk is equal to the default risk of the buyer and not that of the SME (Kappler, World Bank, 2004).

# Chapter 3. Patterns of Globalisation in Five Industrial Sectors[1]

This chapter provides an overview of globalisation issues in the five industries (*i.e.* automotive, scientific and precision instruments, software, tourism and cinema) analysed for this project and presents elements of comparisons between the globalisation patterns, on the basis of desk work and interviews conducted with major players in each industry. The concept of the GVC, as a set of economic processes, sets the frame and background for a closer observation and explanations of how, in different technological markets and contexts, roles are shared among enterprises, in particular large and small, local and global.

## Globalisation issues in five industries

### *Automotive industry*

According to a 2005 estimate by OICA (Organisation Internationale des Constructeurs Automobiles), the automotive industry directly employed more than 5% of the world manufacturing workforce (*i.e.* 8 million people). In addition to these direct employees, OICA estimates there are approximately five times more employed indirectly in related manufacturing and service providers, meaning that a minimum of 50 million additional employees earned their living from this industry.

Automotive production is still concentrated in the most developed regions of the world, as are the relevant markets: 80% of vehicle production and 83% of sales take place in OECD countries, notwithstanding the steady rise of production in non-OECD economies. The trade flows in automotive products (finished and semi-finished vehicles and vehicle components) amounted to almost 10% of all world merchandise trade in 2004, with almost half of the amount being traded among EU member countries.

In 2004 automotive production was close to 64 million vehicles per year (44 million passenger cars and 16 million commercial vehicles, 3 million heavy vehicles and buses)[2] whereas the production capacities for passenger cars were estimated in the range of 70 million vehicles per year (PricewaterhouseCoopers, 2003). There is an excess production capacity that appears as a consequence of a stagnating overall market and of the prevailing cutthroat competition for market share among Original Equipment Manufacturers (OEM), *i.e.* the ultimate assemblers of finished cars.

Many of the industry's major players have changed, and often so dramatically in the last 10 years, due to international, vertical and horizontal mergers, de-mergers, spin-offs, acquisitions and alliances that have been put in place and terminated, with varying degrees of success, in order to cope with competitive pressure. In 2004, 15 global players accounted for almost 85% of the world automobile production. If only passenger cars were considered, the concentration ratio would be 91% for the same top 15 producers (OICA data). The majority of the top players in the automotive industry are global players: their products and brands are bought and sold across the world and their facilities (production, assembly, R&D and others) are dispersed throughout many locations.

In today's sophisticated markets, cars are branded goods, as buyers and users identify them more or less easily with a corporation. The continuing product differentiation and the consequent multiplication of models within brands is a characteristic of this highly competitive industry (Valenso, 2003). However, the differentiation of products stands in sharp contrast with the consolidation of the top players through strategic alliances and M&A. The quest for synergies and efficiency gains has been driven by the search for the critical size that would guarantee the economies of scale required to support sharp price competition and growing development costs. In the automotive industry, the recombination of activities and firm globalisation has been one and the same process. Auto makers generate, per worker, almost three times higher sales and four times higher net incomes than the auto-parts industry, but need five times more capital. These differences suggest that the two activities differ in three important dimensions: *a*) the share of value added; *b*) the share of payroll in value added; and *c*) the factor mix (volume of labour and capital) used in generating one unit of value added.

### *Fewer but more powerful external suppliers*

In the 1960s, the share in added value of the OEM represented two third of the final product's value, whereas today this share is estimated at about one third (Düdenhoffer, 2003). For some brands, such as Smart, the proportion is as low as 20%. Other authors (Veloso, 2000 and EU 2004) provide even lower figures. In the meantime, major OEM either sold or closed most of their proprietary supply facilities[3]. The strategic choice of most OEM to "buy not make" opened new opportunities for existing and new suppliers. The move by OEM toward increased outsourcing has been motivated by efficiency concerns, being accompanied by a strong and sustained pressure on prices.

While increasing the share of external suppliers in the final value added, OEM have also been able to dramatically reduce the number of their direct suppliers in order to cut down transaction costs, stabilise quality and allow for closer co-operation.

### *Concentration on the distribution side*

In the EU, the so-called "block exemption" that used to grant car distributors automatic territorial exclusivity contrary to general competition rules has been replaced by a new, more open market. Under the new rules, competition among dealers is enhanced while the link between sale and after-sale service remains unchanged. The new regulations require both manufacturers, dealers and repair shops to find a new "modus operandi". One of the possible outcomes (EU, 2004, and interviews in Switzerland) is a growing concentration of dealers and distributors, even at an international level. Such an evolution could, in the long run, challenge the presently strong negotiating position of OEM in retail prices and marketing strategies.

### *Policy issues*

Automobiles are tightly regulated products. On the top of other regulations, specific traffic, safety and environmental regulations apply either to the use or production of automobiles. Because of the strategic macro-economic importance of the automotive industry in terms of employment, trade and technical knowledge, specific or even exceptional industrial regulations have been used by governments: the EU "block exemption" that expired formally in 2002; the Japanese voluntary export limitations or the US-Canada trade treaty. One important regulatory issue concerning SMEs is the extension of product liability. Indeed, carmakers press suppliers to take increased liability

for their products not only on the assembly line level but also at the repair-shop level. This attempt at "liability sharing" increases the financial pressure on automotive parts and sub-system suppliers.

### *Scientific and precision instruments industry*

#### *Lack of a general value chain structure*

The scientific and precision instruments (SPI) industry includes complex and sophisticated investment goods or durables which require maintenance and accompanying disposables, such as medical imaging devices, as well as simple current consumption items, such as cheap watches. Nanomaterials and mechatronics are at the core of the SPI manufacturing activity. The extreme variety of situations and of products/services explains why the notion of value chains is seldom used in this sector either because the enterprises are "niche players" or because the products use technologies that are applied throughout a range of other products, but not necessarily in exclusively scientific and precision instruments' products.

Most of the SPI products require a high level of innovation, a high level of customisation (and become rapid obsolete) and highly skilled labour in close proximity to the industry's research and development labs. SPI products such as medical appliances (scanners, pacemakers or lasers) need specialised know-how, as well as skilled and qualified labour. The specialisation and complexity of many of the SPI products lead to high rates of exports compared to traditional manufacturing industries. Innovation in precision instruments is often spurred by sophisticated lead users at top universities, research laboratories, and major industrial firms. For some segments, the intensity of the academic and scientific research explains the emergence of a large number of start ups and the existence of many small specialised companies in the sector.

The SPI industries typically comprise a few large and highly diversified MNEs and a significant number of SMEs. In the US, as well as in Europe, very large companies dominate the retail and B2B wholesale markets for medical devices. The relatively high market concentration for medical devices can be explained by regulatory requirements which are tantamount to barriers to entry and may reduce competition. Dominant companies invest heavily in R&D and in intellectual property protection. On the other hand, SMEs make a significant contribution to medical device innovation. Smaller companies and start ups are more likely to innovate and feed larger companies with their smaller scale innovative technology (CERM, 2005).

Eucomed, the European Medical Technology Industry Association, warns that the medical technology industry is currently facing the important challenge of market globalisation. They claim that most medical technology products are designed to be used in specific patient conditions and comply with local regulations. In particular, in Europe most medical technology segments are national and thus too small. In order to allow European firms to cover R&D expenses, market segments need to be increased through a wider standardisation and better market access.

#### *Policy issues*

In order to stay competitive, SMEs must constantly improve their skills not only in regard to science and technology but also in the management of technology and knowledge of the market and its evolution. The heterogeneous SPI industry might benefit from existing government SME programmes that improve the linkages between research

institutions and SMEs, including pro-active development strategies that help SMEs to improve their technology awareness. The impact that national health regulations (technical, professional and organisational) have on SMEs is important: on one side they may protect niches; on the other side they prevent the exploitation of economies of scale. Promoting industry standards and international co-operation in product and production regulations should facilitate economies of scale and encourage exports.

### *Software industry*

The software industry is very complex, with many complementary products necessary to form a systems solution. Together, the software suppliers, standardisation bodies, service providers, and users form a complex network: the "software ecosystem" as described *e.g.* by Messerschmitt and Szyperski (2003). The software suppliers are active in the conception, development and sales of various types of software such as general operation systems, general application software, specialised professional software, along with partially or totally customised, business-specific IT solutions.

The software industry is a recent one, subject to rapid and fundamental changes in production and distribution. Technological progress in computing power and the Internet have changed the ways in which software is produced and sold. Since physical limits such as processing power and storage capacity are decreasing in importance, the most significant constraints on software creation relate to managing complexity, development, seizing opportunities, and limited financial and human resources (Messerschmitt and Szyperski 2003). Continued progress in software technology raises complex public policy issues such as access to information, national sovereignty and security, law enforcement, protection of the private sphere, etc.

Since the diffusion of personal computers in the early eighties, the creation of software for the traditional hardware or computer system producers has rapidly become a complement to the production and sale of computers, as the availability of software increases the sale of the main hardware products. Software is indeed a complementary product to hardware, but the initial involvement in the creation of software has been followed by a pattern of “disintegration”, because of the limited ability of the hardware producers to understand and to solve specific user problems. In the US for instance, unlike in Europe, the diversity of user industries has made it difficult for computer manufacturers to pursue vertical - sector specific - market strategies. The main reason lies in the fact that the gains derived by computer manufacturers from a more exclusive pursuit of hardware improvement were greater than their gains from controlling integrated software and hardware in a large number of specific markets. The emergence of independent software producers was facilitated by low entry costs.

Globalisation has much stronger effects on IT than on many more traditional sectors. Many IT products, such as software, have a very low weight-to-value ratio which allows the relatively easy global relocation of segments of the production chain to exploit the comparative advantages of different regions.

Software is an unusual economic commodity in several respects and not only because its marginal costs of reproduction are very low. Two broad categories of software “products” should be distinguished: vertical and horizontal market software. Vertical market software is sold to a particular sector and end users with specific needs – for instance to bookshops, car distributors, hospitals, etc. while horizontal market software is designed for general application such as word processing, calculation spreadsheets which are sold to many different industries and users. In general, the first type of software tends

to be more customised while the second one is by definition pre-packaged. With the almost simultaneous arrival of home computers, information services and programmable consumer electronics systems (*e.g.* video game systems), music and video player or telecommunications tools such as mobile phones and PDA, independent software producers and suppliers, as well as various system producers have also become important players in the markets of final goods and services.

### *Towards full integration*

While the 1970s and the 1980s are referred to as the "information age", the 1990s gave birth to the "Internet age" and the beginning of 21st century has already been called "the convergence age" thanks to the development of broadband sources such as fibre, Wi-Fi, and cable modems which provide very high-speed access to information and media. The result is a widespread convergence of entertainment, telephony and computerised information data, voice and video, delivered to a rapidly evolving array of Internet appliances, PDAs, wireless devices (including cellular phones) and desktop computers.

The Internet is the base of the success of a number of software and IT companies. For instance, the revenues of Yahoo!, which is the first worldwide Internet search engine, have been multiplied by a factor of 30 since its creation 11 years ago, and amounts to USD 5.2 billion in 2005. Its competitor Google, which was created in 1998, grew even faster as it surpassed Yahoo! in 2005 in terms of revenue (USD 6.1 billion).

In the "convergence age" multimedia is the growing segment of the software industry. With the success of the iPod and derived products by Apple (launched in 2001, 22.5 million units sold in 2005, representing sales for USDD 3.2 billion or 23% of company's net sales) and other MP3 music players, platforms like iTunes (also by Apple) permitting music downloads have achieved the milestone of 1 billion songs downloaded in March 2005. The success of the video gaming segment of the software industry is evidenced by the fact there are three major players in this industry – Nintendo, Electronic Arts and Konami.

### *An alternative model: the open source*

Traditional software production and distribution relies on the secrecy of the codes and procedure, which is increasingly considered as a key asset. On the other hand, for society at large, the value of holding a secret has to be traded off against the cost of doing so. That cost includes foreclosing the possibility of independent peer review, and betting on a product that is possibly less reliable than it could have been as an open source.

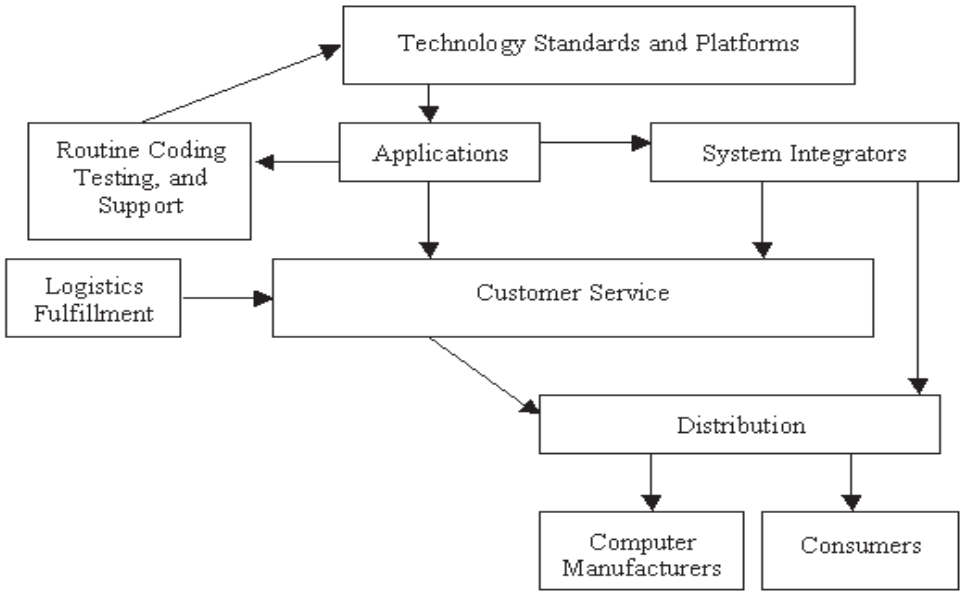
Open source software and operating systems (such as Linux) have developed as a novel form of collaborative software production and distribution, as the technical strengths of the products themselves have proved durable.[4.] From a statistically insignificant presence in 1997, the popularity of Linux and the free/open source software movement has exploded. Nowadays, open source software is even being considered as a useful alternative for e-government applications. For instance, some governments, international organisations and the European Union are financing research (like IDABC, Open Forum Europe, Floos Pols, etc.) to encourage the use of open source software and urge for greater "openness".

### *Software value chain*

In the software industry, the value chain is driven by technology standards and platforms upon which other products are produced. Control over technical standards is a critical factor in the chain, in order to secure, through standardised products, a major part of the value added (*e.g.* Windows by Microsoft; open source operating system Linux by Red Hat). Standard setters have the opportunity to lock in customers around their product lines. This lock-in effect is reinforced by users who must invest time and money in learning how to use the technology and the software.

Typically the major players in the software business, such a Microsoft (operating system) or Nintendo (gaming platforms), have gained control of technological standards and release software applications to the consumer. There are, of course, a number of smaller independent firms, active in customised software production or producing specialised applications fitted for a niche, local or national market. In general, SMEs alone are not able to determine technological standards and trends. They have to make choices as to which standards they will use in terms of hardware, operating systems, and developer software tools, when developing software for existing or potential clients. These choices are risky in the long term as changes may occur in market standards.

**Figure 3.1. Software value chain (personal computer)**




*Source*: Duke University, www.soc.duke.edu.

### *Public policy matters*

Software has a low or negligible marginal cost of reproduction and replication. This implies that society has to grant businesses the right to control reproduction and to charge adequate prices, if investments are to be made in software creation, especially in packaged software. Otherwise, third parties could make a business by reproducing software, and competition would drive the costs of software to the low marginal cost of its reproduction. Therefore, the intellectual property (IP) protection policy has a key

influence on firm strategy and inversely the players of this industry may try to influence the structure of software-related IP protection, as evidenced by the controversy on software patents.

The protection of IPRs, trade secrets and ownership confers the right to control the dissemination and use of information and software, which is an essential element in the commercial relationship between software producers, distributors and the end-users. In most cases, access to the use of particular software can be gained (legally) by paying for a license which can take various forms. According to the license agreement, software can be directly installed and operated by the end-user or sold as a service over the network (by subscription or usage pricing).

The unauthorised copying, reproducing, usage, or manufacturing of (packaged) software may reduce incentives to invest in research and development and to develop new software. Frequent piracy may result in high prices and licensing fees. Investment and innovations, at the firm level, can be encouraged by a patent system, which grants a limited term of exclusive rights to make or sell products, which incorporates an innovation. Unlike trade secrets, the patent owner can exclude others from using an innovation. However, software patents are controversial because state of the art innovations are difficult to capture and describe with accuracy.

## *Tourism industries*[5]

### *A global and complex set of industries*

International tourists' arrivals grew from USD 25 million in 1950 to reach USD 808 million in 2005; international tourism receipts amounted to about USD 682 billion in 2005 (World Tourism Organisation, July 2006). The tourism sector is growing fast in many economies and is today an important contributor to economic growth, job creation and wealth. The market share of the OECD countries has been declining slightly over the last 15 years and now represents about 60% of world tourism.

Today, tourism is one of the most internationalised sectors of the world economy as it is a networked industry which links and integrates different sectors. Tourism activities include accommodations, restaurants, passenger transport services, travel agencies, tour operators, and cultural and sporting services.[6] These industries gather a very large number of small businesses (*e.g.* family hotels, guesthouses, travel agencies, campsites, guided tour operators, etc.) as well as some global players (*e.g.* hotel chains, integrated tour operators, airlines, etc.). The dual nature of the tourism industries, the mix of public and private sector enterprises and the dominance of large integrated firms (*e.g.* tour operators or airlines) as part of the value chain characterise the global tourism economy. Tourism enterprises operate in a global market place but, for a large majority, remain actors at the local level.

At the country level, recent research indicates that OECD countries perform extremely well in terms of tourism competitiveness (regulatory framework, business environment and infrastructure and human, cultural and natural resources). OECD countries represent 84% of the 25 leading countries in the world in the travel and tourism competitiveness index.[7] At the level of enterprises, the appropriate data are lacking to precisely assess their competitiveness. The study on the tourism industry shows that the globalisation of the tourism economy is forcing all enterprises to look at innovative ways to improve the quality and market orientation of their products, their profitability and competitiveness. This situation confronts enterprises with many new challenges, for

example to overcome their small size (a majority of tourism enterprises are micro-firms) in order to gain more power in the value chains or to augment their economic and financial performance.

### *The significant role played by major players*

The international travel and tourism industry, which has considerably grown with the globalisation process, organises tourism activities to various destinations on an industrial basis. They offer standardised products and attractive services at competitive prices and develop global strategies that enable them to make the best use of the local potential worldwide. The major players represent less than 10% of the tourism enterprises but account for more than half of total turnover in the sector and for a significant proportion of employment. They are able to develop new tourism markets and offer new products. This helps them to increase the "customer value" and to reduce their production costs.

- *Hotel Groups*. Between 1995 and 2005, the six leading brands have remained in the same ranking for ten years. A study made by MKG Consulting shows that the growth rate (supply expressed in number of rooms) of the ten group leaders between 1995 and 2000 has been on average 85%. For the most part they have developed organically. Half of these chains are leaders on the economy segment and have a preference for franchise management. Strong growth in supply is mandatory for holding a position among the sector's world leaders. Mergers and acquisitions have been the preferred means for achieving growth for the larger international groups. The major players benefit from their competitive advantage of global brand name recognition, better know-how and skills in networking, which develop opportunities for strategic alliances under good conditions.
- *Tour Operators*. As intermediaries between tourists and tourism service providers, tour operators bring together a variety of tourism-related services to form a complete holiday package, which is then marketed to customers either directly or through travel agents. Each package generally consists of accommodation (often including some food provision), transport both to and from the destination, ground transport within the destination, and events or activities such as excursions and social activities. The tour operator industry has been the subject of many strategic movements in the last ten years. In Europe, there has been an intense vertical integration and consolidation among tour operators in Germany, Scandinavia, France, Italy, Spain and the United Kingdom. The top providers today are fully integrated tourism groups that occupy a major share of both the air package tour market, the most significant sector economically, and the charter flight market. The vertical integration of tour operators increases the size of the tour operator and its revenues by lowering costs, for example, for distribution, product differentiation and improving operating efficiency.

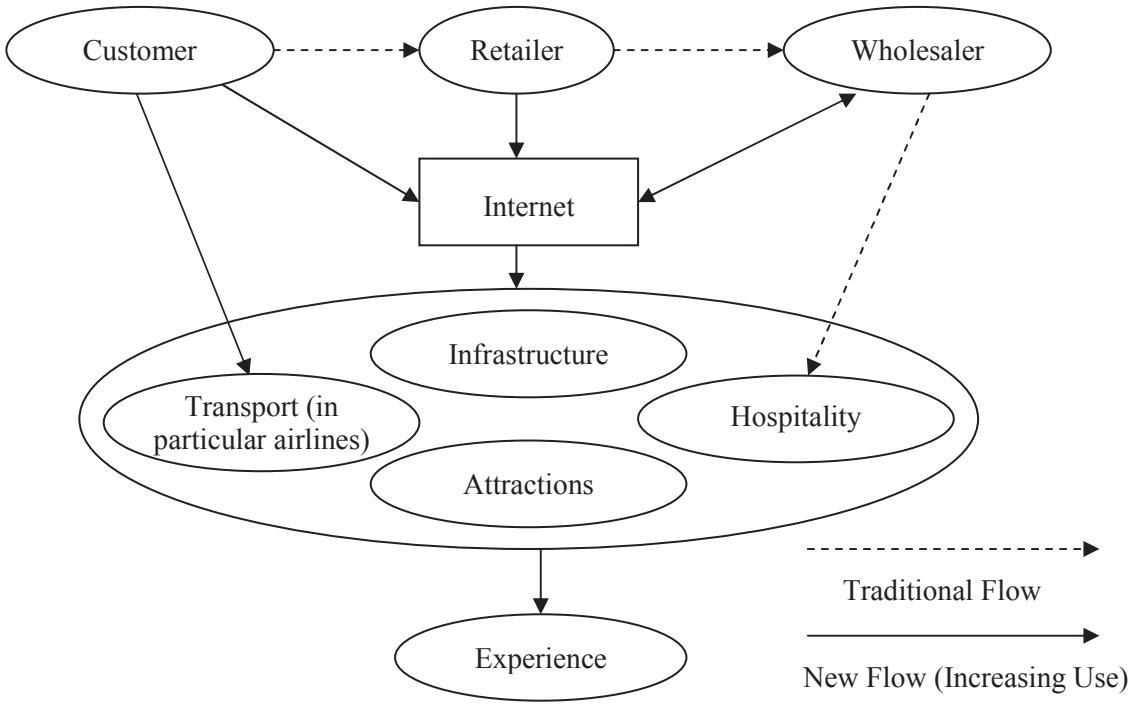
### *The growing role of the consumer and information technology in the governance of tourism value chains*

Value chains in tourism rarely correspond to the linear model of production that may exist in other industries. Rather it reflects the fact that tourism is a networked and complex industry with multiple entries into the value chains. Moreover, travel and tourism services are information intensive, highly amenable to digital delivery, and targeted towards customers who are typically not local. ICT developments place the

consumer at the centre of the chain, which gives SMEs, with their small size and flexibility, an important role to play in customer satisfaction and individual treatment.

The Internet has brought about a fundamental change in that all categories of firms, large and small, from anywhere in the value chain, can now communicate directly with their end customers. The Internet has had a significant effect on the governance of the tourism value chain and it is transforming the travel and tourism services value chain. Although the producers of tourism-related products and services and the various intermediaries take a leading role, it is the consumer who now actually governs the tourism value chain. Consumers have different paths available when purchasing the end product, unlike in other industries. ICT allow the producers of tourism- related products and services to reach directly the consumer/tourist, bypassing the intermediary. However, the consumer-driven, highly fragmented and geographically dispersed tourism industry is still maintaining a significant level of intermediation. Tour-operators and travel agents act both as aggregators and integrators of the tourism services and products while other public/private entities like National Tourism Boards and Destination Management Organisations also act as non-profit intermediaries for the benefit of producers at the destination.

**Figure 3.2. An example of value network for the tourism industry**




*Source:* Tourism industry case study, Australia, 2005.

### *Networks and clusters are key elements for success of SMEs in tourism*

The study on the tourism industries highlighted the key role played by other forms of inter-firm relationships. The consumer is looking for a comprehensive tourism experience which includes all the products and services (transport, accommodation, catering, entertainment, etc.). Such an "experience" cannot often be provided by a single small business. Tourism is by nature a "connecting business". Over the last decade there has been therefore a considerable interest and dynamism in developing clustering and

networking among destinations and tourism related SMEs to strengthen their competitive advantage. Value-based SME networks may be established within a destination or a tourism cluster. Natural resources have long provided small tourism firms with an incentive to cluster. Many regions, however, lack the critical mass of firms as well as the critical infrastructure (hard, financial and human infrastructure) needed for cluster development and growth.

The body of literature in this area supports the hypothesis that belonging to a cluster or a network *i*) can enhance the productivity and the rate of innovation and technological development, *ii*) can help to build a common industry view to lobby the local authorities, *iii*) can overcome some disadvantages of small size by undertaking co-operative actions (*e.g.* in marketing), *iv*) can pool resources for human capital development, and in the end *v*) can enhance growth in tourism and the competitive performance of firms. In other words, clusters and networks can allow SMEs to combine the advantages of small scale with the benefits of large scale. SMEs in tourism can participate in several "overlapping" networks, depending on perceived value, such as the lowering of transaction costs and exploitation of economies of scale. The participation of SMEs in value chains and networks is also an incentive for entrepreneurs to take a more managerial approach to business and for SMEs to increase their capacity, thus improving their economies of scale and achieving cost reductions. Successful tourism clustering or networking requires a high level of cohesion, professionalism and industry knowledge.

### *Global value chains and networks: an incentive to improve in know-how and innovation*

The impact of globalisation on the structure of tourism supply and value chains is evident. The participation of SMEs in value chains and networks contributes to the emergence of innovative projects, behaviours and activities by generating a process of continuous improvement to satisfy customer expectations. There is a high potential for niche markets, notably of high-yield markets for further SMEs and entrepreneurship development in tourism. ICT developments place the consumer at the centre of the chain which gives SMEs with their small size and flexibility an important role to play for customer satisfaction and individual treatment.

Despite these opportunities, the challenges are numerous. Small businesses lack skilled human resources, competences and financial resources to increase their participation in value chains, networks or clusters or to meet requirements for new product and process standards. Many SMEs in the hotel or travel agency sectors are dependent on global/regional players and are in fierce competition with other SMEs; this situation is creating a strong pressure on prices and is reducing the profitability of SMEs. As discussed in Chapter 4, many SMEs in tourism do not understand how they can benefit from increased participation in GVCs and therefore do not co-operate with large players.

In this context, government policy should focus on areas where the market may not sufficiently provide what is needed to improve the performance of the tourism industry, especially for small enterprises. A limited public intervention might enhance collaboration among the enterprises as well as an improved quality of policy for inter-firm and inter-regional networks and clusters. It should facilitate the participation of SMEs in GVCs or networks and/or help SMEs to upgrade their positioning in the system, for example to participate in GVCs.

### *Cinema industry*

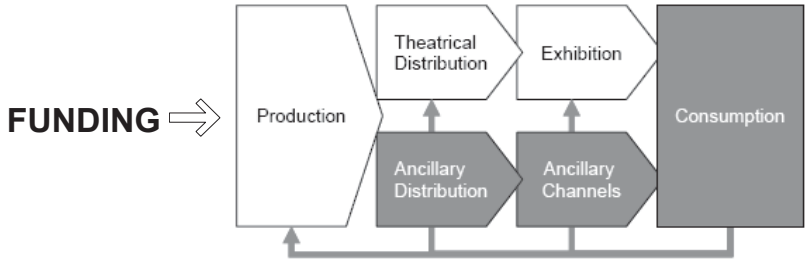
In the cinema industry the major studios simultaneously engage in four distinct business functions: financing, producing, distributing, marketing and advertising of their film and television properties. To carry out these functions they depend heavily on many smaller firms. The dominant position of major Hollywood filmmaking studios should not obscure the fact that SMEs are essential to the industry's operation, occupying important niches in the filmmaking and distribution process.

From top to bottom, the process is contract-driven. These contracts allow large and small enterprises to interact, usually on a project-by-project basis, and to opt out *ex ante* under normally well-defined stages and conditions. Use of such option-related arrangements is common in all creative industries and, in effect, acts as the glue that connects the many links in the value chain (Caves, 2000).

#### *The financial architecture: the key issue*

Both hedge and private equity funds are capable of providing upwards of USD 500 million to USD 1 billion in return for the rights to either "first-cycle" revenues of already released films (*i.e.*, revenue advance securitisations) or future securitisations of production costs for films yet to be released. It now appears that every major studio has co-investment deals with such funds, which have claims on revenues generated by the slate of films that they help finance, but only after the studio has been paid distribution fees and recouped expenses related to prints and advertising. Investments in production, prints and advertising for the average major studio release have climbed steadily since 1980 at a compound annual rate of around 8%, which is far above that of inflation (at least double) over the same period. This cost inflation greatly accounts for the much increased current need for funding as compared to ten or fifteen years ago.

**Figure 3.3. Value chain for motion pictures**




*Source*: Eliashberg *et al.* (2006) and Vogel and Christiansen (2006).

Production funds are made available only when the key elements such as final script, director, actors, and most importantly, distribution services, have been bound to the project through contractual agreements. Many small firms, including talent and artist management agencies, are fundamental to the contracting process: they are key links in a value chain that aligns the talent (directors, performers, cinematographers, writers and so forth) with specific production projects.

Funding is a perennial issue for companies both big and small given that the long-run upward trend in the costs of production and marketing shows no signs of abating. This is not related so much to the cost of technological implementation which tends to become less expensive over time, but more because of top-line talent – be they feature film directors, actors, musician-composers, or game and special-effects designers – who are likely to continue to command stiff premiums. However, new forms of securitisations of cash flow and of new financing structures are always in development and are an integral part of the industry's history.

### *Highly concentrated production and distribution*

According to Motion Picture Association of America (MPAA) data, 611 feature films were produced in the US in 2004, of which 483 were released. The total number of films released by MPAA member studios typically accounts for around 90% of the total box-office generated. Other, smaller distributors, generate only 10% or so of the box office in most years.

Major studios may i) develop and support in-house 40% of their distribution needs, ii) joint-venture or buy rights through "pick-ups" and acquisitions account for another 30%, and iii) rent access to their established distribution pipelines, for a much smaller distribution fee (*i.e.* 12.5% to 17.5% instead of the usual 30%). Such "rent-a-studio" and pick-up deals greatly enhance the whole media ecosystem by adding a degree of diversity and creativity that would probably not otherwise have a presence.

### *The importance of advertisement investment*

It is important to realise that all subsequent fees are related to the box office performance and distributor "rentals" account for less than 15% of the total revenues – DVDs, cable and satellite and television market licensing generate the remaining 85%. Although the box office now accounts for a much diminished share of total revenues, it is still the window that not only sets up the film's subsequent marketing and title recognition conditions but, moreover, absorbs and channels most of the advertising expenditures. For a major feature film in the US, such expenditure normally averages around 50% of the direct production (the "negative") costs. Thus, films budgeted at USD 100 million for production may on average require an additional USD 50 million for advertising and promotional efforts.

The motion picture and television businesses globally face wrenching changes – from production, to distribution, marketing, exhibition, display devices, and even audience viewing habits and preferences. For instance, production of animation has gone from hand-drawn to computer-drawn with firms like Pixar (now part of Disney) and DreamWorks leading the way. Moreover, new art forms melding video games and films are now being developed by SMEs. Game playing experts have begun to make short films, called "machinima", directly using the scenes and characters generated by the games themselves. Indeed, the difference between a live-action and computer-generated graphic is becoming indiscernible. And these new genres are not a de facto US monopoly.

Online distribution of filmed entertainment is also now in an early stage of experimentation. CinemaNow, Movielink (owned by Sony, Time Warner, Vivendi, Viacom, and MGM), and Vongo (introduced by Starz Entertainment Group/Liberty Media) are currently in the forefront, but the technology is advancing rapidly and new distribution strategies are, in response, beginning to take shape.

### *Is film merchandise? Public policy in question*

The question of the economic status of a film is a debated question. According to the free-market approach, there is no ground whatsoever for public subsidies to the film industry. In the US, funding sources for US film production do not include direct government subsidies, as is commonly the case in European countries. This difference is reflected in the value chain at every point. But there are various local city and state government agencies in the US that have the ability to provide some tax credits and rebates for film productions in general. In France, champion of the *exception culturelle*, a system of public support exists through the Centre National de Cinématographie. The current French system is based on collection of funds through taxes on cinema products and its redistribution to players of the cinema value chain that often are small enterprises.

## Different configurations of value chains

The industry value chains under review differ in many aspects and it is therefore difficult to make a comprehensive comparison between them. The choice of aspects to compare was a function of data availability and of the research questions concerning the role of SMEs (Table 3.1).

The key deliverables of the five industries differ in at least five dimensions:

- *Degree of heterogeneity* of deliverables produced by a given industry.
- *Nature of the deliverable*: product, service or both as in the case of software products.
- *Price range*: from tens of USD for movie products to millions in the case of sophisticated hospital equipment or software packages.
- *Speed of product innovation*: product or service life-cycle.
- *Durability of the product*: life-span of approximately ten years in case of automobiles, immediate consumption in case of cinema ticket or tourism.

### *Existence and capacities of a focal firm*

Each contemporary global value chain can be divided into two segments, a segment in which all value added activities are centred on the production of the good or service, and a segment in which efforts to reach the final customer or user results in increased value added. The approximate moment or place where the focus of attention moves from production to the market is called here the 'focal point'. It cuts the global value chain into an upstream segment centred on production and a downstream segment centred on the market.

For the purpose of this document, 'focal firms' are defined as those enterprises (major players) that consistently operate value adding processes on both sides of the focal point, *i.e.* both in production and in marketing/distribution. The term focal firm is inspired by the taxonomy of supplier networks elaborated by Harland *et al.* (2001). Accordingly, the automotive global value chain would combine a high focal firm's influence with a low network dynamics, while for instance the global value chains for some medical and scientific instruments derive from highly dynamic networks with a low influence of focal firms.

The presence of focal firms is evident in the automotive industry, in most of the software activities and in most of the cinema industry. Their presence is less clear in the two other industries analysed, namely tourism and scientific and precision equipment. Also, in the industries reviewed focal firms are in most cases well- recognised major or global players listed on stock markets. A critical question that remains to be answered is what portion of value added in each of the segments is generated directly by the focal firms and what portion is left to partners upstream or downstream the chain.

An additional important aspect of the GVC structure refers to the sources of strengths of the focal firms in each industry and the level of concentration. For instance, while the command of economies of scale is still the key strengths of automakers, standard setting is critical in software activities.

Evidence suggests that in the automobile GVC, the focal point is located around 65% of the final value added which means that distribution and marketing efforts make up for the remaining 35% of the final value of the product. In scientific and precision instruments industry, the focal point could well be located around 80%, while in cinema industry it is about 50%.

### *Alternative and competing global value chain structures*

It is important to know the nature of the GVC, that is whether the structure of the GVC is a unique one (as in automobiles), a dominant one (like in cinema), one of few (like in tourism) or if there is no clearly dominant global value chain structure as in scientific and precision equipment industry or, as in the cinema and software industries, if there is room for an alternative structure (such as remote delivery methods and piracy). The questions of contestability and innovation in the GVC structure are closely related to the one about the strategic portion of the GVC: what activities add the most value and what activities determine the next steps of transformation.

### *Role of SMEs in production and distribution*

The place and role that SMEs actually play or could play in GVCs depend on the role and strength of focal firms and the prevalence of the GVC structure. In the *production segment*, the situation is more open, since focal firms in each chain configuration are, at least to a certain extent, either dependent on efficient suppliers (especially knowledge and innovations suppliers) or prone to competition by new entrants. This is the case for the scientific and precision instruments industry, in software, in cinema and above all in tourism. In the *distribution segment,* if the chain structure is firmly structured around strong focal firms the role left to SMEs is limited to "mass distribution", to customisation as in the case of software, or to provision of additional services like in the case of automobiles.

### *Methods of trans-enterprise co-ordination or governance*

Most of the GVCs under review involve long-lasting interactions between enterprises. In most cases these interactions extend beyond a textbook type of market transaction. Many different wordings have been used in literature extending from alliances or partnerships to outsourcing. However, none of these terms is precise enough to capture the ambivalent issue of trust, power, negotiation, reciprocity and in some cases even solidarity among enterprises co-operating within a global value chain. Despite the fact that these aspects extend beyond the accepted field of economic expertise, they are vital to understand the actual and potential roles of SMEs.

The most commonly known typology of "global value chains" governance is the one developed by Gereffi (1994), which differentiates between buyer-driven and producer-driven value chains:

> *"Producer-driven value chains are those in which large, usually transnational, manufacturers play the central roles in co-ordinating 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 value chains refer to those industries in which large retailers, marketers and branded manufacturers play the pivotal roles in setting up decentralised production networks in a variety of exporting countries, typically located in the third world. This pattern of trade-led industrialisation has become common in labour-intensive, consumer goods industries such as garments, footwear, toys, house wares, consumer electronics and a variety of handicrafts" (UNIDO, 2004a, based on Gereffi).*

Each of these configurations is based, in the last analysis, on economies of scale achieved by the enterprise that is central to the value chain. In either of these configurations, SMEs cannot do more than be second or even third-tier suppliers. The typology of global value chains governance has been recently expanded (Gereffi *et al.*, 2005) along three characteristics: the level of complexity of inter-firm transactions, the extent to which information can be codified, and the degree of capability of the supply base in relation to the requirements of the transaction. This approach generates five relevant types of GVCs, extending from high to low level of "explicit co-ordination" and "power asymmetry": hierarchy, captive, relational, modular, and market.[8] When the governance is of the network type, in particular in the relational and modular governance form, SMEs are likely to have a more relevant role.

### *Are roles evolving?*

GVCs are not static, as they are sequences of value adding activities that may change due to external factors such as new technology or regulation. They may also evolve because of internal changes such as strategies to outsource or abandon certain activities to partners.

In most well established GVC structures, SMEs have to face focal firms, for whom the stronghold in the chain is a strategic asset. These firms devote considerable resources to mastermind the critical portions of the chain and to streamline it, so as to optimise their own economic performance. They are able to manage critical knowledge, technologies and intellectual property assets on a global scale. Moreover, many focal firms have the financial liquidity necessary to quickly acquire "interesting" SMEs.

Symmetrically, SMEs have control of the basic knowledge of individual processes and local clients and they are quick at exploiting niches, but lack the overall understanding of chain structure and of key assets. As a result, they often end up in a weak negotiating position when confronting focal firms. Even when SMEs do have a comparative advantage, they may have difficulties defending it in terms of their share in total value added generated by the chain (see Annex B).

**Table 3.1.Key attributes of the five industries analysed**

| | Automotive Industry | Scientific and precision instruments | Software | Tourism | Cinema |
|---|---|---|---|---|---|
| **Long term industry trends** | Deverticalisation accelerating in the 1990s; massive capacity subcontracting; geographical reorganisation of supply base excess capacity; growing concentration through M&A; tendency toward global technologies and regulations | Technology and demand driven; the development phase can be short | In the 1970s, with the emergence of PC autonomisation of software production from hardware; with the "convergence age" higher degree of integration; software producers are part a wider IT system; technology and Internet convergence or integration | Long term fall in travel costs; ageing and more leisure prone societies in OECD countries; wide use of ICT. | Growing vertical integration along the value stream from production to distribution; IT, especially the Internet, is deeply affecting traditional distribution channels. |
| **Key deliverable** | Fairly homogenous but highly "branded" durable products; long product life-cycles; average price USD 10-20 000. | Extremely heterogeneous product lines often coupled with expert services or disposables; rather short, technology driven, life-cycles; price brackets: from a few USDD to millions for sophisticated hospital equipment | Set of instructions that move hardware; mass product or customised service; shortening life-cycle depending on standards and available hardware. Standard mass products ca USD 1000USD, professional packages may run in millions | Services related to all activities undertaken by visitors outside their usual environment. Price brackets: from few hundred to few thousand USD | Aesthetic performance/experience in a theatre or in private environment (home); very short life-cycle. Price brackets: USD 10-50USD. |
| **Critical portion of the value chain** | Access to the final customer; very high entry barriers | Technology and product innovation; reasonable contestability | Control of standards; certain contestability | Distribution of products/information | Access to distribution |
| **Methods of delivery** | Mainly unique - retail outlets | B2B and B2C | Multi-channel, Internet based, fraudulent channels (piracy) | Services can be either sold in bundles or packages through intermediaries or purchased separately by the tourist | Multiple channels: cinemas, DVD, downloads |
| **Existence of focal firms** | Yes | Only in some highly specialised markets | Yes | Tour operators aspire to this role | In most cases, yes |
| **Global Brands** | Controlled by strong focal firms with important marketing budgets | Growing but still secondary | Present specially in horizontal (all user) markets | In air transport, hotel, tour operators and travel agency activities | Global reach of successful products; global stars |
| **Key strengths of focal firms** | Economies of scale; global optimisation of production; negotiation capacities with suppliers and retailers | Management of multiple technology platforms | Capacity to manage complexity, product architects (Microsoft), complex system operators (Google; Yahoo!) | Capacity to contract out in advance services of suppliers; quality control and insurance | Capacity of funding but also of advertising in order to limit the financial risks involved in production |
| **Role of the focal firms** | Strong: product design and architecture; key technology control; brand management; negotiation capacity | Rather weak: multi-technology and multi-product; mastery of synergies | Standard setting, on which other products are developed | Integrators of complementary "primary" services | Strong: intellectual property clearinghouses, production, and marketing of rights |
| **Existence of alternatives GVC structures** | No, but recourse to car rentals possible | Heterogeneity | Proprietary vs. open source philosophies | Direct access by clients to "primary" service providers | Illegal (recourse to piracy) |

**Table 3.1.Key attributes of the five industries analysed (*cont.*)**

| | Automotive Industry | Scientific and precision instruments | Software | Tourism | Cinema |
|---|---|---|---|---|---|
| **Up-stream coordination mechanism** | Stratification of suppliers, with some strategic niche suppliers | Networks, local clusters | Complexity management, subcontracting | Local clusters; destinations management | Contract with options on a project basis with durable right |
| **Down-stream coordination mechanism** | Growing control of retailers by the focal firms | Often direct distribution by producers: B2B | Retailers are or may be customisers for vertical market products | Global reservation systems; franchising in hotel industry | Contract with options on a project basis with durable right |
| **Explicit governance** | No | No | Possible | Franchising in hotel industry; locally joint supply | Interdependent contract network linking risks and rewards along the whole production chain |
| **Global vs. local market** | Global production involving potentially local clusters; global distribution | Production is dispersed (possible clusters); medical equipment products have to obey local regulations; elsewhere markets are global | Local adaptations (linguistic) may be required, but the hardware is global | Global distribution; local provision of tourism services | Localised production (clusters); global distribution |
| **Role of SMEs in the upstream segment** | Focal firms' supply chain structured into different tiers. First tier made of global enterprises. SMEs appear mostly in second and third tiers where they are mostly mass suppliers. Some SMEs enter first tier as high-knowledge suppliers, including R&D. | Possible independent of focal firms, but often dependent. SMEs are present at any segment of the chain, especially in innovation processes. | Potential innovators and challengers of standards and focal firms. In most cases, mass code suppliers. | Independent niche players, or linked to focal firms as ultimate producers of 'primary' tourism services; locally locked; franchisees | Exceptionally competitors of focal firms; in most cases component suppliers or retailers |
| **Role of SMEs in the downstream segment** | Ongoing concentration in retailer networks. Repair shops still mostly SMEs. | | SMEs are retail customisers and application developers. | Traditional travel agents. Today, they lost their 'raison d'être' due to Internet delivery. | Shops for distribution of DVD and screen theatres but strongly dependent on movie distributors and producers. |
| **Policy implications** | Important: Security, liability and environmental norms: global convergence of norms | Local safety and professional norms; intellectual property norms | Very important: intellectual property norms and protections - lack of global convergence; public policy dilemmas | Important but limited: natural and cultural amenities are considered as public goods. Local support for destinations, safety and security, environmental and quality standards | Public support in question; cultural goods |

## Notes

1. This chapter was prepared by the Swiss research team led by Prof. Paul Dembinski.
2. Depending on the source, heavy vehicles and buses are either included or excluded from production and market statistics in unit terms.
3. Ford sold Visteon in 2000, and GM did the same with Delphi in 1999.
4. The open source movement has been the inspiration for increased transparency and liberty in other fields and the open-source concept has also been applied to media other than computers. It also constitutes an example of user innovation and "open source" is becoming an expression to mean that a system is available to all who wish to work on it.
5. The study on the tourism industries has been carried out by the OECD Tourism Committee. It focused on hotels and tour operators, including travel agencies [see CFE/TOU(2005)1, CFE/TOU(2005)3, CFE/TOU(2005)4, CFE/TOU(2006)9 and case studies for Australia, Austria, Germany-Jordan, Korea, Spain (Andalusia and Balearic Islands), Poland and Switzerland].
6. Tourism Satellite Account: Recommended Methodological Framework, UN, UNWTO, OECD and Eurostat, 2001.
7. World Economic Forum, *The Travel & Tourism Competitiveness Report 2007*, March 2007.
8. World Economic Forum, *The Travel & Tourism Competitiveness Report 2007*, March 2007.

# Chapter 4. SMEs and Global Value Chains: Case Studies Findings

This chapter presents the findings of the case studies carried out in several OECD and non-OECD member economies in the five industries selected for the study (*i.e.* automotive, scientific and precision instruments, software, tourism, and film production and distribution). The case studies began by gathering the basic information necessary to draw an 'identity card' of the enterprises interviewed, in particular detailing the number of employees, the turnover, the ownership structure, the location(s), and the products or services supplied. The investigation then focused on the core issues in order to understand value chains and their structure; the co-operation with and dependence on other players in the chain(s); the role of technology, innovation, standards, and intellectual property rights (IPRs); and the SMEs' expectations with respect to the role of government in facilitating and supporting their participation in GVC. As explained in Chapter 3, the main characteristics and emerging patterns of the five industries were analysed on the basis of desk work and interviews with key players. The results of that analysis constituted the background context for the interpretation of the case studies' findings.

## Awareness and understanding of global value chains

Awareness of the business environment and its evolution, and an understanding of the critical characteristics of it, are the basic but necessary steps to build a firm's sustainable competitiveness. The case studies explored these issues by questioning SMEs on their knowledge of the market in which they operate and of the role that different actors play in it. The interviews resulted in the following findings:

- There is unequal understanding and appreciation of the global value chains by SMEs. This seems to be a function of the sector and/or the position of the firm in the chain. Small firms in the automotive sector seem more apt to understand the structure of the value chain to which they contribute than the average SME in other sectors, for which the concept itself of the value chain is not always easy to grasp. This is likely related to the complexity of the configuration of the value chain as in the tourism or cinema industries, the fact that the SME serves very different industries as is the case of suppliers in the scientific and precision instrument industries or that it occupies a low position in the chain and therefore, there is limited knowledge beyond the surrounding environment as is the case for some SME suppliers in the automotive sector.
- Many SMEs across different sectors are not able to identify their competitive advantage through a value chain analysis, nor do they fully understand the importance of doing so in order to optimise their participation in GVC. Indeed, some of the interviewed firms explicitly raised this issue, by pointing to the lack of time and resources to devise a market strategy: specifically, the case studies on the tourism sector in Korea and the Toyota automotive enterprise in South Africa both report that the interviewed SMEs mentioned their need for time and adequate human resources to understand the global context and analyse strategic issues. This, in turn,

translates into an inability to define an adequate business model to gain or reinforce a firm's competitive advantage. Box 4.1 presents an example of a simplified analysis of a firm's strengths in its market.

- Specialised and niche market SMEs are more conscious of their competitive strength, which they associate in particular to the flexibility and quality of their offer as in the scientific and precision instrument and software industries these firms have also succeeded in leveraging key assets from their lead partner, namely reputation (Box 4.2). However, customisation of production is perceived as risky when it creates dependence on just one buyer.

### Box 4.1. Analysing an enterprise's key attributes

Ideally, any enterprise should be able to understand the key elements of the market(s) in which it operates and to identify the assets critical to maintain and also improve its competitiveness in that market(s). The result is shown in the table below, which identifies the key strategic attributes for distinct segments in the tourism sector in the Balearic Islands (Spain).

| Most important business attributes by sector | |
|---|---|
| **Accommodation sector:** | **Travel agency sector:** |
| • Service by the personnel<br>• Location and facilities<br>• Quality and excellence in the service<br>• Brand and know-how<br>• Customer satisfaction and individual treatment | • Personalised service<br>• After-sale service<br>• Quality |
| **Transport sector:** | **Leisure and catering sector:** |
| • Security<br>• Quality | • The human team |

*Source*: Case study on the tourism sector, Centre of Tourism Research and Technologies of the Balearic Islands, 2006.

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### Box 4.2. How Egyptian suppliers are serving Microsoft globally

The case study of Microsoft in Egypt reveals that domestic SME partners have largely benefited from their association with Microsoft (from a capability as well as a track record perspective) and are leveraging that partnership to drive growth in the Gulf market. The Gulf market is quite vast and does not contain the necessary qualified and skilled human resources to implement all the IT projects it is undertaking. In this reciprocal relationship with its partners, Microsoft is benefiting as it is able to find trusted companies to do the work according to its world standards. Support partners are increasingly serving Microsoft globally. These companies' success in serving Microsoft in one country, or region, makes it easier to serve a variety of technology companies all over the world. In the global IT and IT-enabled services markets, these companies are addressing an extremely large fast- growing market, which means they are also competing with a large number of companies from all over the world. Microsoft is often perceived as a highly visible "lighthouse account" that lends immediate credibility to service providers and places them on the global radar screen of other potential buyers.

*Source:* UNCTAD country/enterprise case study on Microsoft Egypt, 2007.

Table 4.1 summarises the answers from the interviewed SMEs on the topic of awareness and understanding of global value chains.

## Table 4.1.SMEs' awareness and understanding of the value chain

| Question / Case study | The structure of the value chains (VC) of their sector, their market/ price structure/ competitors | Their key assets or weaknesses in the chain |
|---|---|---|
| **Automotive** | | |
| Australia | Due to long-term relationships and the flow of information through the GVC, automotive firms have a high level of awareness of the other players in the industry and the industry's overall structure. | SMEs see their competitive advantage in niche, medium to high-tech, high quality production, particularly for small volume runs. |
| Japan | SMEs at different points in the chain seem to have an unequal appreciation of the elements characterising their sector. Firms at lower tiers are less aware. | SMEs believe that the key factors for successful participation in GVCs are quality, cost and timeliness, which in turn require skilled human resources and technology. |
| Spain | SMEs have a profound knowledge of the auto VC and of the main players. | SMEs consider their flexibility, adaptability, and ability to produce short series as their strengths, but recognise that large firms have greater financial capacity and a stronger technology base. |
| Turkey | The firms interviewed have a good understanding of the VC. More than half consider their level of transformation of goods and services high. They have to cope with a serious price pressure given the risk of loss of market share although their contracts are on confidence and long term basis. | Well trained human resources, patents and trademarks are considered as key assets. |
| India: Tata Motors | SMEs' level of awareness and understanding of the GVC is quite high; some of them have been practicing it for over ten years in various forms. | SMEs as the original suppliers of branded products entered the GVC slowly but on a sustained basis. The use of latest technology, coupled with high precision, quality control and rejection rates within industry-specific permissible level have given them a competitive edge. |
| Mexico: Volkswagen | SMEs have a good or very good understanding of the VC structure and are aware of the prevailing conditions in the market(s) they serve. | First-tier suppliers have become too specialised, producing only one product; Second-tier suppliers have a broader competitive edge |
| South Africa: Toyota | SMEs supplying Toyota South-Africa have a good understanding of the concept of GVC and of their position in the chain. SMEs interviewed are aware that they supply components which would contribute to less than 1% of the final price of the motor vehicle. | SMEs consider critical the need to meet specifications in international standards and systems and provide their own technology offering or that of a strategic partner in meeting future production demand. |
| **Scientific and precision instruments (PI)** | | |
| Australia | Difficult to generalise as the SMEs in the PIs industries supply a diverse range of industries. Typically, they find it difficult to conceptualise their position within GVCs. | SMEs believe that the strength of their position is related to quality, the range of products, operation within a niche market, service follow up, and in a few cases accreditation. |
| **Software** | | |
| Turkey | Most of the interviewed companies believe that they play an important role in GVC by producing customised software, in co-operation with large MNEs, and packaged software solutions. This co-operation is beneficial to companies' production and distribution capability. | R&D is seen as being the key asset crucial for success. Many respondents indicated that competitiveness is the most important factor for successfully participating in GVC. To obtain a larger share of the global arena, Turkish SMEs have to develop their human resources, improve the quality of service and satisfy sector requirements. |
| Egypt: Microsoft | All the companies interviewed were clearly aware of the global VC. On average, they have been part of the Microsoft GVC for 4.5 years. Most of them have international competitors mainly located in the Gulf Region or in India. | Most suppliers have a relatively low degree of transformation of their incoming Microsoft services. Although there is a high level of sophistication amongst firms, only one of the companies has reached the level of innovation required to develop its own products from scratch, and even then, this is still done only occasionally. |
| **Tourism** | | |
| Australia | SMEs do not find the conceptual framework of GVC very pertinent to their activities. | Branding and well-trained staff are recognised assets. Strategic alliances, geographical clusters allow organisations to work together to increase their market share. |
| Austria | SME hotels participating in co-operation schemes have a good understanding of the service VC. | For SMEs, professional co-operation management is key to create added value that is both measurable and sustainable. Only few SME alliances have launched an international co-operation. |

| Question / Case study | The structure of the value chains (VC) of their sector, their market/ price structure/ competitors | Their key assets or weaknesses in the chain |
|---|---|---|
| Germany/Jordan | Jordanian SMEs recognise German tour operators (the producers of the package tours) as the main agents of the VC. | High costs of internalisation (establishment of a branch office in the country of destination) are an obstacle for SME tour operators. |
| Korea | Most companies have a low level of awareness of the GVC, although they try to establish new business paradigms to generate more revenues. | Lack of financial capital, knowledge and technical know-how, brand management and marketing skills are important barriers for the participation of SMEs in GVCs. |
| Poland | Many SMEs have a limited knowledge of their role in the global tourism VC. They consider travel agents and tour operators, as well as large international or domestic hotel chains, as the key players of the VC. | SMEs identify as key factors of competitiveness cost levels, service quality and coverage. Competition at the local, regional and international level pushes costs down and promotes the training of personnel. |
| Spain (Andalusia) | The SME hotels recognise the large tour operators as the main agents of the VC. Travel agencies acknowledge their role of intermediation and identify the large vertical groups and transport companies as the main agents of the VCs. | Small independent hotels try to differentiate themselves from establishments belonging to the large hotel chains by dealing in a more direct and familiar manner compared to the more impersonal environment of those large chains. |
| Spain (Balearic Islands) | The Balearic enterprises see themselves as producers within the structure of the VC, which they believe should always be focused on the customer. | The key assets are identified in brand, customer satisfaction, and quality / price ratio. Product diversification is seen as an important strategy to reduce dependence on a specific market and also to deseasonalise. |
| Switzerland | Travel agencies & tour operators have a better knowledge & understanding of VCs in the sector than SME hotels. | For SME, personalised service and advice to their customers is a key asset. |
| **Cinema** | | |
| Korea | The VC is dominated by few major companies. Korean firms clearly understand that the domestic market itself is too small and they must expand their businesses into global markets. Given that global market is too large to approach by them, SMEs plan to collaborate with other firms in various activities. In particular, they would like to co-operate for global distribution. | The most competitive asset for the Korean firms is the digital content production skills and IT-related technologies. Since there is a strong trend of content convergence across related sectors, Korean SMEs believe they may be among the most advanced firms in the digital aspects. They also recognise human resources with high-talent and knowledge of global markets as critical success factors. SMEs think that production technologies and platform skills are quite advanced, while content needs to be more adjusted to global preferences. |
| United States | The VC is extremely complex, with complementary roles for large and small firms. The major studios depend heavily on many smaller firms to carry out their mission. Although the major studios have a dominant position in Hollywood filmmaking, SMEs are essential to the industry's operation and occupy important niches in the filmmaking and distribution process. | Small firms are important sources of innovation, compared to the studios that are slower to react to technology and tend to follow the lead of the smaller companies who take the risk and show the reward of new systems. The ability to rapidly adapt to new business models is a critical asset. SMEs are also responsible for many higher-quality films. |
| Colombia: RCN and Caracol | Most 3D-animation companies interviewed are not familiar with the concept of global VCs, but are clearly aware of the immediate supplier-producer relationship.<br>The two national TV channels have their own in-house production for 3D-animation used for TV shows/serials identity packages and promotion, and TV channel branding. When in-house capacity is insufficient or if outside providers possess specialised technological equipment for specific productions, the TV channels outsource the production of 3D-animation either to specialised firms or to individuals working freelance. | SMEs benefit from the fact that Colombia serves as a "creative hub" for some transnational advertising agencies, operating in the Caribbean, Central- and South America. |
| Nigeria: Nu Metro | Nu Metro has a strategic partnership with Warner Bros, MGM and Disney. This makes Nu Metro part of a global VC stretching from Hollywood to a flourishing Nigerian movie industry known as Nollywood. The movies are supplied through Nu Metro Distribution. Nu Metro has been part of this global chain for about two years. Within this framework, Nu Metro belongs to tier 3. Nu metro has fourteen local suppliers and belongs to two GVCs, namely the movie/cinema industry and the optical disc production industry. | In the case of international movies destined for theatrical distribution, no value is added to the product. The prints are circulated and exhibited in a line up that begins in South Africa then Nigeria and Kenya. However, Nu Metro, in line with government's vision of promoting quality, is partnering with government to screen Nollywood movies in digital format (from March 2007); establish the African film festival (to be held in Nigeria commencing 2007); ensure that quality rather than quantity is the trademark of Nollywood; and follow attentively the international release trends. |

*Source*: OECD country/industry case studies and UNCTAD enterprise/country case studies, 2005-07.

## Co-operation in global value chains

The case studies investigated the degree of co-operation between SMEs, their partners and competitors in the chains. As explained before, one important phenomenon in the globalisation of value chains is the disengagement of lead companies from several stages of production along the value chain, which has implied the transfer of greater responsibilities to subcontractors, who are presented with an increasingly demanding number of tasks. Contractors demand more of their partners not only to manufacture a product or provide a service, but also to contribute to its development, to organise and monitor a network of sub-suppliers, to implement internal systems of quality control and assure compliance with an increasing set of standards, and to ensure delivery and quality at competitive costs. There are, therefore, pressures on SMEs to merge, in order to achieve the critical dimension necessary to support R&D costs, training of personnel, control of firms in lower tiers of the chains, and fulfilment of requirements in terms of standards and quality. Although problematic for the SMEs concerned, this pattern is not inherently bad, as it can bring a more efficient resource allocation in the economy.

The findings of the case studies highlighted the following points:

- As expected, the degree of co-operation between firms is a function of the complexity of the product or service: co-operation tends to be low in the case of manufacturing simple components, while it is high when products are more complex.
- Trust and reputation still represent two relevant dimensions of long-term relationships between SMEs and their clients, and are vital to the success of the business (as in the auto industry and tourism). However, among SMEs at every tier of the chain there is a widespread feeling of vulnerability due to constant pressure to decrease costs.
- Most SMEs that are below tier 1 suffer from poor or insufficient information flow, as they mostly rely on information transmitted from other suppliers working at levels between them and the contractor. Some complain of not being properly recognised and appreciated for the high standard of technical contributions they make to the industry. On the contrary, there are cases of close co-operation where tier 1 firms assist their sub-suppliers in improving the quality of their offer, although this occurs as part of their contractual obligations vis-à-vis the main contractor (as in the example in Box 4.3).
- SMEs see location in a cluster as a factor that boosts co-operation and facilitates technology upgrading to the benefit of internationalisation (as explained in Box 4.4). In recent years, research on business clusters has focused on the links between cluster analysis and the value chain approach with a view to identify policies to improve international competitiveness of enterprises in clusters (Pietrobelli and Sverrisson, 2004; UNIDO, 2004a)[1] The argument is that clustered firms are under the pressure of global competition and experience the erosion of their competitive advantage, and therefore they may find a new source of competitive advantage in linkages external to the cluster, notably when participation in GVCs improves upgrading capacity and market access. Recent research indicates, indeed, that clustered firms have increased their extra-regional sales and purchases (Altenburg, 2006).

- A variety of co-operation models exists in the tourism sector where many small hotels have remained independent. SME hotels appear confident of the benefits of setting up alliances in the case of horizontal co-operation (as in the example described in Box 4.5), while the advantages of affiliation to large groups are not always clear to them. However, SMEs recognise that belonging to chains for commercialising products and services provides them with more bargaining power when negotiating with other actors in the tourism industry and in related chains.

### Box 4.3. Co-operation between first and second tier suppliers of Volkswagen in Mexico

Firms that are first-tier suppliers of Volkswagen, such as FTE Mexicana and Johnson Controls, have helped second-tier suppliers to improve quality through certification–ISO/TS 16949 (which is the reference standard for quality management system in the automotive sector, and is based on ISO 9001) – in order to enter or remain in VW global value chain. For these suppliers it was difficult to meet quality requirements more demanding than local standards.

These first-tier suppliers consider themselves as a key factor for Volkswagen, as their contribution to cost reduction, product and process improvements is essential for the auto industry competitiveness. They also consider that their role in the global value chain has increased as they have been developing second tier suppliers, have become involved in setting product specifications, and provide advice to the Volkswagen plant on product management.

*Source*: UNCTAD country/enterprise case study on Volkswagen in Mexico, 2006.

### Box 4.4. Boosting the competitiveness of the automotive parts industry in Chinese Taipei

In its early stage, the automotive parts industry in Chinese Taipei developed along with local automakers such as Yulon. In particular, the Chinese Taipei automotive sector has specialised in the production of non-branded component parts. These non-branded components are often cheaper than the branded ones and are sold through separate distribution channels. The market share of these non-branded auto components is rising in Europe and North America and is expected to continue to grow.

The case study on the automotive parts industry in Chinese Taipei showed that, despite the considerable development of Chinese Taipei production of domestic auto parts and components, the industry has not yet been able to join the procurement chain of big international automakers because it lacks plants operating at a sufficiently large scale. The Ministry of Economic Affairs has promoted the development of large professional auto parts traders, to act as facilitators of SMEs integration in auto parts supply chains and assist domestic manufacturers to obtain the certification required by international automakers.

At the same time, Chinese Taipei manufacturers see significant opportunities stemming from the increasing demand for customised auto parts. The availability of qualified human capital and the degree of sophistication of IT infrastructures in Chinese Taipei are considered as two key assets to respond to the demand for customisation. Also, the cluster approach is deemed effective to further improve the diffusion and up-take of ICT technologies among SMEs in the auto parts sectors and facilitate co-operation between partners in the value chains.

Table 4.2 summarises the answers from the interviewed SMEs on the topic of co-operation between SMEs and other partners in global value chains.

### Box 4.5. SME alliances in the Austrian tourism sector

About 99% of all establishments in the Austrian tourism sector are SMEs of which more than 90% employ less than 10 staff members. The increasing global competition has prompted numerous SMEs in the tourism sector to initiate or to join a co-operation scheme as a prerequisite for a more successful performance of their businesses. Today Austrian companies representing nearly 50% of bed capacities available in the hotel sector are already involved in an inter-company co-operation venture because they are convinced that this will help them to increase their profitability.

Approximately 97% of all ventures involve co-operation in the fields of marketing / advertising / distribution, *i.e.* they represent the classic pattern of a horizontal co-operation (*i.e.* a partnership between enterprises of the same economic sector or the same service industry). Far reaching co-operation activities as for instance the pooling of human resources are seldom found, whereas 26% of the co-operation ventures try to realise savings by joint cost management measures (joint purchasing or joint investments, collaboration in the allocation of staff members for administrative, accounting or controlling tasks, etc.). In 38% of the cases this aim is already defined in the co-operation agreement. More than two thirds of the co-operation ventures insist on compliance with specific quality criteria by all partner establishments and have also a system of regularly monitoring them.

The positive aspects of an inter-company co-operation clearly outweigh the negative ones and appear mainly in the marketing field. They translate into an increase in capacity utilisation and turnover figures. Relatively "innocuous" data like overnights and capacity utilisation ratios are commonly shared. On the other hand, business data that would give a clear picture of the profitability status of the partner companies are revealed only very reluctantly although this would probably be the very area where an exchange of experiences and a thorough analysis of the turnover and cost structures of their competitors would probably be seen by the individual partners as a most welcome return on their investment in a cooperation venture.

*Note*: Co-operation in the Austrian case study is defined as a sustained collaboration of businesses in the tourism sector that has a clear-cut contractual basis as well as a jointly defined economic aim.

## Technology, innovation, standards and IPRs

The reconfiguration of production and division of labour along value chains has important consequences on the way knowledge and innovation are created and transferred. Since the knowledge base tends to expand as a function of the diversity of actors that take part in the production process, the globalisation of value chains is likely to create more opportunities for skill development. However, complications can also arise for small suppliers and subcontractors because new competencies are generated and combined in a larger network of actors than they are used to handling.

The case studies findings pointed to the following matters:

- Many SMEs see technological capabilities as critical and consider that continuous development of new technology is necessary to remain competitive, in addition to the ability to respond to given standards (as illustrated in the case studies in the automotive and scientific and precision instrument industries). In the tourism sector, small and medium-sized hotels rely, in particular, on organisational and marketing innovation to raise their competitive edge. The introduction of new technology remains mainly the outcome of pressure by the governors of the chain. However, many SMEs at the bottom of the chain consider that they have little or no transfer of information and technology from their contractors, as already mentioned (see case studies in the auto industry).

## Table 4.2.Co-operation within the value chain

| Question / Case study | Level of co-operation with contractor(s), suppliers and/or partners | Level of dependence of SMEs from main contractor(s) |
|---|---|---|
| **Automotive** | | |
| Australia | Some SMEs have longstanding relationships developed over many years in the industry, and believe that the team-oriented dependent relationships built up within the supply chain were vital to the success of their business. These relationships are driven by trust and reputation. Some other SMEs indicate that due to the price pressures placed on them, their relationship with suppliers was based on price. | Many of the SMEs consulted, recognising that their reliance on the Australian OEMs is a weakness, were attempting to diversify their operations into other industries so as to achieve a more balanced income stream in the future. |
| Japan | SMEs at the 2nd tier and below benefit from little or no co-operation with the leading companies in the chain. | SMEs have so far adapted to the overseas strategy of their contractors (*i.e.*, SMEs now serve the overseas markets). |
| Spain | Power asymmetry characterises the relation between SMEs and their clients. Co-operation tends to be unidirectional, from the supplier to the client, and entails no obligations for the latter. | Most of the SMEs sell more than 50% to contract clients, often on the basis of verbal agreements. The contract duration corresponds to the production life of the product to which suppliers contribute. |
| Turkey | The companies interviewed exhibited a high level of co-operation with their clients especially regarding product design and development. Co-operation with their competitors is limited to benchmarking (price, quality, production volume, etc.). | Many companies consider themselves completely independent in the selection of suppliers, but they carefully take into account the requirements of vehicle manufacturers they supply. |
| India: Tata Motors | There is a growing trend towards long term relationships with customers and suppliers of raw materials and services. Contracts are mostly settled through negotiations and personal contacts on a long-term basis. | Most of the SMEs interviewed are dependent on just one GVC. Enterprises have little or no freedom in selecting the market in which to operate. |
| Mexico: Volkswagen | The co-operation between tier 1 suppliers and contractors is very focused on production with little co-operation on process or product development. Tier 1 co-operate closely with tier 2 suppliers. | Most tier 1 suppliers are specialised in the auto industry and therefore have little independence. Tier 2 suppliers are more independent as they serve many clients. |
| South Africa: Toyota (TSA) | There is a high degree of co-operation between TSA and its suppliers. Supply relationships are based on trust and tend to be maintained for many years. | Only those SMEs suppliers that have built a close relationship with TSA are able to remain in TSA supply chain. They also tend to serve GVCs of other industries. |
| **Scientific and precision instruments** | | |
| Australia | There is a low level of coordination between manufacturers and suppliers, and the supply base is large and highly competitive when the components are simple. However, high level co-ordination with a small number of suppliers occurs when the components are critical. | SMEs in the precision instruments industry are involved in many different GVCs. |
| **Software** | | |
| Turkey | Most of the companies produce under license from large MNEs. Agreements are mainly of two types: SMEs are sales agents for MNEs products; or they develop customised solutions (mostly frequently with 50:50 joint ventures). Some of small firms serve as liaisons for large local software developers. | SMEs that develop on-demand software solutions have a lower level of independency, despite their effort in order to develop open source code software and improve flexible solutions. |
| Egypt: Microsoft | A symbiotic and reciprocal relationship of co-operation exists between Microsoft and its Egyptian suppliers. For the Microsoft partners, the relationship with Microsoft Egypt is of extreme importance in terms of aiding them to develop their business and expand their scope. The existing eco-system of partners is of great help to them with regards to new market entry and credibility. | There is a general trend towards establishing long-term contracts with Microsoft. All of the firms interviewed are certified Microsoft Gold Partners and mentioned that a personal relationship with Microsoft accentuates the element of trust. Even if there is no exclusive relationship with Microsoft, over the years the Partner-Microsoft relationship grew stronger and allowed partners to experience the "lighthouse effect", credibility from serving a large well known company, and therefore expand geographically especially in the Gulf region where there is a lack of local skilled resources. This highlights the importance and prestige of the Microsoft-Partner certification program. |

| Question / Case study | Level of co-operation with contractor(s), suppliers and/or partners | Level of dependence of SMEs from main contractor(s) |
|---|---|---|
| **Tourism** | | |
| Australia | SMEs tend to be loyal to their traditional partners, with whom they have longstanding alliances. Relationships tend to be more prevalent at the domestic than at the international level. However, an increasing number of SMEs are affiliating themselves with MNEs, either as individual suppliers or as local franchisees. | Most tourism providers continue to see themselves as largely self-sufficient and independent entities. They develop their own strategies, identify and meet the needs of particular segments of the tourism market in their own unique ways, and generally rely on a finite set of partners to bring their products and services to market. However, even the most 'independent' travel agent now feels compelled to join a franchise in order to gain power. |
| Austria | Inter-firm co-operation includes co-operation between companies of the same sector (*e.g.* family hotels) or with partners of a different sector (*e.g.* hotels and cable car companies). | Local hotels choose to co-operate to maintain their independence but reach a critical mass. A co-operation venture in the tourism sector without a clear legal basis or a specific co-operation agreement just does not work. |
| Germany/Jordan | The co-operation between tour operators and incoming agencies is central to the operational management of the value chain from the market to the destination. | Incoming agencies (IAs) play a central role as co-ordinator and controller of package holidays in Jordan due to regulations which force every foreign tour operator (TO) to work in partnership with Jordanian IAs. However, for attracting foreign tourists, they are dependent on the foreign TO as they have no direct access to markets. IAs are highly fragmented and they have little scope to negotiate with foreign tour operators. |
| Korea | About half of the surveyed medium-sized hotels have a partnership with companies of other industries, most frequently credit card companies. Small hotels partner with travel agencies, to receive support on the reservation system. | Most SMEs hotels (less than four stars) are operated as independent hotels. |
| Poland | Most SMEs are affiliated with trade organisations (*i.e.* tourism organisations, chambers of commerce). However, it is felt that affiliation does not bring clear benefits. | More than half of the SMEs interviewed are independent of any hotel chains, and they only envisage co-operation for joint advertising or, more rarely, to share reservation systems. Some SMEs have franchise contracts. |
| Spain (Andalusia) | The hotels consulted have signed a great number of individualised contracts with different tour operators, booking centres, and virtual or traditional agencies. Prices and quotas tend to be set, with strong pressure on prices. A high percentage of hotel establishments belong to commercial chains which allows them to increase their negotiating power with the others in the tourism value chain. | All SME hotels and travel agencies interviewed are independent. However, both depend on tour operators for most of their reservations and turnover. |
| Spain (Balearic Islands) | Co-operation occurs within associations of enterprises in the sector at the local level and with employer organisations at a regional, national and international level, mainly for joint promotion. Associations with tour operators through guarantee contracts or co-operation agreements for joint promotion. The large hotel chains also establish joint venture agreements with suppliers and partners for the joint development of their activities or to benefit from the brand name of specific international enterprises. | Only big hotel groups are able to belong to several value chains, since their activities are both horizontally and vertically integrated. |
| Switzerland | Tour operators develop close partnerships with hoteliers and other partners with a view to strengthen the interconnection of the different products to quickly respond to the customer and to make economies of scale. Travel agencies tend to work with a limited number of tour operators to optimise their revenues. Hoteliers co-operate with colleagues for marketing purposes or to optimise their supply chain. Hoteliers also develop new forms of co-operation with ski lifts and cable car companies. | Some independent travel agencies choose to join the brand of a tour operator to increase their revenues. Many hotels do not work with tour operators because of their small size. |

| Question / Case study | Level of co-operation with contractor(s), suppliers and/or partners | Level of dependence of SMEs from main contractor(s) |
|---|---|---|
| **Cinema** | | |
| Korea | Co-operation between SMEs is not very active. Since major Korean firms in the film industry participate in funding, production, distribution, and screening, SMEs have relatively few opportunities to collaborate with other firms. Thus, a typical collaboration pattern of SMEs is the cooperation in the same sector, such as production or distribution, which is called as parallel co-operation systems. | Korean SMEs are quite independent in the cinema sector while very small firms usually rely on one or two clients. However, in the GVC perspective, most of them are less confident that they can expand their businesses into global markets by themselves. |
| United States | Although many of the companies providing services (transportation, insurance, food catering, set design, lighting, location scouting etc.) are relatively small, perhaps consisting of only a few people, it is not uncommon for such businesses to have been long-established and with significant historical ties to their counterparts at the production studios, theatre chains, and broadcast and cable television networks. | Many entry points are available to SMEs, but virtually all such firms are dependent on or require the co-operation of the large production and distribution entities for capital and other supporting input factors, the most critical of which, after capital, is distribution. Up to the point of consumption, every part of the value chain requires sophisticated legal contracts to be drawn, and expertise in accounting, finances, and taxes to be employed. |
| Colombia: RCN and Caracol | The level of interaction between clients and 3D-animation producers varies according to the type of client. In general, it can be observed that 3D-animations for TV production show a higher level of freedom in creativity than for TV commercials. In the case of advertising agencies and post-production firms for TV commercials, the company submits the story-line, whereas in the case of TV production, the 3D-animation producer only receives the initial idea and needs to add value based on his own creativity. Due to such limitations in the creative process, many 3D-animation producers prefer working with TV-CN or film producers than with advertising agencies or postproduction firms for TV commercials. Cooperation between 3D animation producers is not very active. | The level of dependence on the main contractor varies according to the type of client. In the case of postproduction firms for TV commercials, film producers and TV-Channels, relationships are based on trust and even sometimes friendships, which favour a more long-term oriented business relation. Advertising agencies, however, do not stick to a preferred supplier. Contracts for a specific creative work are assigned based on tenders where usually the supplier with the lowest price-offer wins. Apart from the price, trust is an important factor for supplier selection and is based on both quality and delivery time. Price, however, is more important for national than international clients. |
| Nigeria: Nu Metro | The most important partners for Nu Metro are situated upstream and horizontally, that is, the parent company in South Africa and the co-distributors in Nigeria. The entertainment industry in Nigeria is a cluster of determined firms and individuals who against all odds have moved the industry from nothing to Nollywood. Nu Metro belongs to this geographic cluster and is working together with the others for the development of the entertainment industry. | As to international movies, Nu Metro in Nigeria is fully dependent on what is received from South Africa. In Nigeria, Nu Metro holds the monopoly for distributing Hollywood films. External linkages are quite limited as the Nu Metro group appears to have been designed to be self-supporting and self- propelled. |

*Source*: OECD country/industry case studies and UNCTAD enterprise/country case studies, 2005 - 2007.

- Some SMEs indicate that *the capacity to finance innovation* is a requirement to participate in the GVC which they find difficult (Box 4.6).
- In the automotive industry, the issue of R&D capacity was raised by several firms across countries. Indeed, the modularity of production in this sector has brought important changes in the repartition of R&D functions. As in most assembly industries, where final assembly consists in putting together a relatively small amount of pre-assembled systems, system suppliers are responsible also for R&D functions. The cost savings for contractors can be very significant. In the automotive industry, more than one quarter of the total cost associated with a new model is accounted for as development costs and is incurred before a single car is assembled, because all the parts have to be designed, functionally related, checked for interactions, for energy efficiency, noise, etc. The assembly methods based on modularity allows a contractor to transfer the cost of development to its system suppliers who become responsible for developing the systems that they supply. This

opens important opportunities of growth for those small suppliers that are able to afford the investment necessary for this functional upgrading.

- In the tourism industry, the diffusion of information technologies, in particular the Internet represents both an opportunity and a threat for SMEs (as explained in Box 4.7).
- SMEs consider it relevant to better manage their intellectual assets, including through protection of intellectual property rights when appropriate. Interviews with key players in the automotive and scientific and precision instruments industries confirmed cases reported in recent empirical literature, namely that one form of control of the subcontractor consists in the request of complete transparency of information on virtually every relevant aspect of its business. Passing original designs to the contractor becomes a contractual obligation, and not just based on mutual trust. An additional element of pressure for the subcontractor is the fear that not providing complete information could preclude future orders (White Paper on Small and Medium Enterprises in Japan, 2003). The risk of this is that original designs and plans submitted to the contractor can then be passed to lower-cost competitors, as reported in some case studies. However, the issue of intellectual property is not to be reduced to one of protection. For some SMEs, in fact, the realisation of value from their innovations comes from selling them to the market instead of keeping them in-house. For this reason, it is the overall management of intellectual assets that SMEs should target.
- Most SMEs complain that standard requirements to be part of global value chains are very demanding, and in some cases the cost and time invested to fulfil requirements are not necessarily compensated by a premium in prices. Niche players seem better equipped to face these problems because of their higher level of technological knowledge as in the scientific and precision instruments industry.

**Box 4.6. Funding innovative SMEs in the Polish tourism sector**

The Polish case study on the tourism industry found that, with available funding, "many enterprises would invest their capital in modernising their infrastructure, broadening their range of additional services and would assign free cash flow to marketing activities". However, the lack of funding hampers many firms from introducing the necessary innovation that would permit ensuring, strengthening or upgrading their position in the chain. The ability to innovate is considered critical to better participate in tourism value chains.

### *Product and process standards*

The case studies' findings are a good illustration of the role of standards in GVC. In many industries meeting specified product and process standards has become a necessary step to participate in the GVC. Not only is entry in the chain conditioned to meet increasingly higher standards, but also firms need to be prepared to rapidly switch to new standards, should these evolve for technical or strategic reasons.

There are many benefits in adopting process and product standards especially when they correspond to a higher level of technology than what is already used in the firm. Standards facilitate the transfer of knowledge and they support technological upgrading of firms. However, several issues emerge from the actual pattern of standard enforcement in firms occupying lower tiers in the chain. First, there is a question of the volume of standards. There is an increasing pressure on standard adoption in industry in order to

### Box 4.7. Internet usage in the Australian tourism sector

According to the findings of the case study on the Australian tourism industry, the Internet proved to be an opportunity as well as a threat for SMEs. Some SMEs have benefited from the Internet, as it has allowed them to enter the value chain, make themselves known and compete and interact with the larger firms. It has given SMEs an opportunity to take control of their product distribution, and is a particularly useful marketing tool as it is relatively low cost. This enables SMEs to market their service worldwide without relying on and paying commission to third parties.

The increased use of the Internet, which has impacted on retail travel agents through the rise of live inventory websites such as *lastminute.com.au* and *wotif.com.au,* has also created an opportunity for niche travel agencies. These more specialised travel agency services provide high levels of customised service for tourists who either do not wish to use the Internet or still like the security of a travel agent. They have the ability to organise complex arrangements and offer a relationship of trust.

A negative impact is however felt by retail travel agents who are not currently maintaining their share of travellers or getting repeat business. It is also felt by hotel operators. The shortening of booking periods has made it hard for forward planning, cash-flow, staffing and other related measures. It creates additional demands on SMEs. Although some operators understand how to use the Internet to their advantage, many are still learning about the Internet and there is not much sharing of information to facilitate learning. The Internet is very challenging and crowded, and a simple website by itself is next to useless. Wotif.com, Travelocity, Qantas and State Tourist Commissions are great ways to distribute products, but for SME hotels trying to manage their inventory, it can become confusing.

For those markets without Internet access, or which cannot easily use English websites (for example, Middle Eastern, Chinese and Korean markets), the Internet presents another problem. An intermediary such as an international tour operator, restaurant, duty free shop or consortium of such players becomes necessary to assist with Internet access, complicating the value chain. Furthermore, prospective travellers have expectations of technology being factual and up-to-date which makes it important for SMEs to ensure that Internet sites are up-to-date, fast and with good links. The costs involved in staying up- to- date technologically can be a disincentive for SMEs, particularly those in rural areas with limited access.

respond to requirements for security and protection of health and environment coming from governments, and to satisfy an emerging demand for higher quality standards expressed by consumers and, more generally, the civil society. These add to the standards set at the level of enterprise to fulfil one or more of the many functions that standards serve (*i.e.* compatibility, information, quality, variety, etc.).

In addition, small volumes of orders may limit the scope to adapt to specific requirements and to afford the cost associated with investment in new equipment and systems, obtaining certification, and developing the capabilities required to meet new standards. For subcontractors that manage other subcontracting firms, there are additional costs in ensuring standard compliance at their sites and at those of their own suppliers. It is recognised that costs of certification are, on average, very high for small firms.

According to some researchers, lead firms tend today to externalise the control of compliance along the value chain of the whole set of standards necessary to meet the market requirements and for which default could harm the brand image (Gereffi and Sturgeon, 2004). These standards include also those related to matching civil society's concerns with respect to, for instance, processing and production methods for organic, fair trade, sweatshop-free, child labour-free products etc. Such controlling tasks are very demanding for SMEs.

Finally, standardisation may bring a type of homogenisation of offers that has both benefits and risks for SMEs. One example is the practice of the franchise in tourism. Small hotels that can be associated with a well-known brand in the sector will benefit from visibility and reputation on the quality and delivery of the service. However, they

will probably lose the main advantage of a personal service that distinguished them from competitors.

Table 4.3 summarises the answers from the interviewed SMEs on the topics of technology, standards, and IPRs.

**Table 4.3. Technology, standards and IPRs within the value chain**

| Question / Case study | Technology/ Intellectual Property (IP)/ Ability to cope with required standards |
|---|---|
| **Automotive** | |
| Australia | Technological capabilities were recognised as a strength by Australian SMEs. This is reflected in their ability to create products featuring a high level of development and innovation, and to develop unique and competitive processes to create these products. **IPRs:** SMEs denounce a lack of IP security within MNEs' global value chains, resulting in unauthorised use of SMEs' IP in low-cost manufacturing countries. |
| Japan | SMEs in tier 2 and lower have insufficient information concerning the industry's products and advanced technologies. SMEs are concerned about the lack of in-house technological capabilities |
| Spain | Half of the surveyed SMEs believe that the relationship with their client(s) is not transparent and that they do not have sufficient information. SMEs introduce new technology at the urging of clients. Most of them participate in product development along with their clients who have the last word. Larger firms in the sample cooperate with clients on more equal terms. SMEs had to develop new competencies to keep pace with the chain by investing in technology, process upgrades and R&D. **IPRs**: SMEs engaged in R&D and innovation do not appropriately protect their intellectual assets. |
| Turkey | A large majority of the companies interviewed implement the manufacturing processes using international standards and technologies under licence and the rest have their own trademarks and patents using high and innovative technologies. All companies are required by law and by the customers to fulfil necessary production standards. Use of ICT is common in all companies. **IPRs:** Most of the companies use technologies, trademarks and patents under licence. Companies recognise the importance of protecting IPRs. |
| India: Tata Motors | Most SMEs depend on the technical specifications given by the buyers. Overall, SMEs invest more in tangible than intangible assets. Only some of them have activities related to R&D, design and product development. Some SMEs have well developed in-house product development capabilities and could therefore capture the supplies to Fiat, Ford, Suzuki and Mercedes Benz. |
| Mexico: Volkswagen | First tiers firms exchange information with their suppliers. Tier 1 suppliers assist their suppliers to improve their quality. |
| South Africa: Toyota | SMEs feel many of the standards requirements are very onerous, complex and absorb much administrative time, but do not necessarily provide a basis to obtain premium prices within the automotive value chain. |
| **Scientific and precision instruments** | |
| Australia | SMEs consider that there is a high level of knowledge and transparency in the industry. **IPRs**: There is concern over the lack of IP protection and its enforcement, particularly when designs are sent offshore and reverse-engineered. |
| **Software** | |
| Turkey | **IPRs:** SMEs are well aware of the importance of IPRs; and believe it is important to protect IPRs in every field of software development. |
| Egypt: Microsoft | There is a lack of originality amongst domestic SMEs and a relatively low percentage of product transformation. Most IT firms tend to be service-oriented companies that offer add-ons on an already existing Microsoft product rather than come up with their proper innovative and creative solutions. **IPRs:** All interviewed companies are aware of the importance of IPRs. In Egypt, IPRs are protected by new laws specifically mentioning software, database designs and layouts of integrated circuits. The Egyptian Government, in cooperation with multinational donors, has also started educating judges and district attorneys on the specific issues related to IPR violations. |
| **Tourism** | |
| Australia | Operators of small accommodation see the Internet as a complex opportunity which is currently being only partially utilised. Tour operators and travel agents are much more likely to view the Internet as a barrier to increasing their role within the GVC. The Internet boosts the power of consumers by allowing them to by-pass a step in the value chain. |
| Korea | ICT uptake by SMEs is gradual and is seen as a tool to strengthen competitiveness. |

| Question / Case study | Technology/ Intellectual Property (IP)/ Ability to cope with required standards |
|---|---|
| Poland | The majority of hotel SMEs make insufficient use of ICT tools, due to the high costs of implementing new IT solutions and buying licences. As a consequence, the companies tend to use only basic IT tools. |
| Spain (Andalusia) | The use of new technologies is imposed by the large touristic intermediaries or suppliers more in travel agencies than in hotel establishments. However, set-up costs are paid exclusively by the agencies, which requires a considerable effort for them. They all work with Amadeus that pays the maintenance costs for its IT application. |
| Spain (Balearic Islands) | The travel agency sector sees the Internet as a very serious competitor. Innovation expands and improves the offer. Information systems and the Internet are making this process easier |
| Switzerland | For tour operators and SME travel agencies, the use of ICT for connecting the various providers of services is primordial for giving the consumer accurate information and prices and for validating the reservations in real time. Many SME hotels are still not connected to networks and to reservation systems but would like to make progress in this area to increase their profitability. |
| **Cinema** | |
| Korea | Korean SMEs actively utilise new IT and digital platform technologies in the film and other content production. These trends make them very open to adopting various innovations. Considering the rapid progress of the digital convergence in Korea, SMEs will be among the earliest players to leverage new technologies and innovations. |
| United States | Due to the technological upheaval, traditional production and distribution business models have become outdated and this has created many opportunities for SMEs. Much of their work will ultimately be applied to entertainment distribution and display devices and to production processes. Yet, given the great need for development capital and for marketing and distribution expertise, it is unlikely that many successful SMEs can or will remain independent for long. |
| Colombia: RCN and Caracol | The driving factor behind outsourcing of 3D-animations for the two national TV channels mainly lies in the degree of specialisation of many 3D-animation firms. In many cases suppliers possess more specialised technical equipment, as well as skilled human resources. The bulk of employees of 3D-animations firms either studied publicity or graphic design at Colombian higher-education institutes. Additionally, a software provider for 3D-animations recently opened a training centre in Colombia. |
| Nigeria: Nu Metro | In the case of DVD sales, Nu Metro faced strong competition from local pirates who had a more efficient distribution system and an advantage in pricing. Outright importation of DVDs made Nu Metro uncompetitive despite the superior quality. Thus, Nu Metro reappraised its policy and set up a DVD replicating plant in Lagos, and converted some of the erstwhile pirates into legitimate distributors. |

*Source*: OECD country/industry case studies and UNCTAD enterprise/country case studies, 2005 – 2007.

## Perceived benefits of SMEs' participation in global value chains

From a theoretical point of view, many factors suggest that the integration of SMEs in global value chains, under specific conditions, is for the benefit of these firms. During the interviews, SMEs were asked about their perception or experience of participation in GVCs. The main findings can be summarised as follows:

- Overall, the answers by the SMEs in all sectors support the argument that the *participation in global value chains brings benefits to SMEs or is expected to bring them*. Firms that have successfully integrated in one or more value chains have been able to gain stability or expand their business. Even those SMEs, who have chosen to remain at the margins of the global value chain, recognise the potential for growth associated with participation in GVCs (Box 4.8).
- One key factor of successful integration is co-operation within the network, Co-ordination of work with partners upstream and downstream increases the chances of success due to substantial benefits in terms of information flow, access to superior technology and learning opportunities.

Table 4.4 summarises the answers from the interviewed SMEs as regards their perception of the benefits of participating in GVCs.

### Box 4.8. Hovering on the edge of the value chain of Toyota South-Africa

One of the interviewed firms indicated that it had made a strategic choice to place itself at the margins of the GVC by producing vehicle accessories that had less onerous requirements than full production components. Yet this firm continued to actively pursue various forms of accreditation and built up its own design and technological capability to remain in line with the overall approach of Toyota South-Africa. In light of this, the firm reiterated the importance for management to retain a good working knowledge of the GVC and its dynamics in order to understand a customer's needs. All the interviewed suppliers indicated that, should they wish to expand their scope of production to export to other Toyota plants, they have no choice but to seek international partners and work within the GVC.

*Source*: UNCTAD country/enterprise case study on Toyota South-Africa, 2006.

**Table 4.4. Perceived benefits of SMEs' participation in global value chains**

| Question / Case study | Benefits of being part of a supply/value chain |
|---|---|
| **Automotive** | |
| Australia | Many of the SMEs indicated that the GVC was critical to the future of their business and has allowed them to grow and achieve economies of scale. Australia has only a small automotive market and being a part of the GVC has enabled SMEs to form new alliances, to access more customers, to build more comprehensive networks and to source new suppliers. |
| Chinese Taipei | There are significant benefits from strengthening the role in the GVCs of small specialised suppliers of non-branded auto components used for maintenance. |
| Japan | The benefits of participating in GVCs depend on the capacity to contribute to activities with a high degree of value added. |
| Spain | SMEs estimate that the GVC offers them expansion opportunities, along with the acquisition of key knowledge. They also believe they can increase turnover and sales benefiting from growth at the worldwide level of the automotive sector. |
| Turkey | The large majority of the companies interviewed stated that involvement in GVCs provides new business and co-operation opportunities. In addition, involvement in GVCs also keeps them informed of state-of-the-art technologies, and of developments in their industry and market. |
| India: Tata Motors | All the respondents unanimously feel that the GVCs they serve bring opportunity for them to globalise and opens up both national and international outlets. Technical know-how also comes from the large companies seeking supplies from them. Opportunities are there but it is entirely up to SMEs to capture them for their own advantage. Entering GVCs on a sustained basis is only possible if SMEs use the latest technology and proper supply-chain management . |
| Mexico: Volkswagen | SMEs consider that being involved in the VW global value chain is quite profitable: they can reduce marketing costs because their sales are guaranteed by VW demand, and they receive the benefits of expanding global demand. As one SME interviewed said, "it is difficult to be outside the global value chain because it is the only way for growth". |
| South Africa: Toyota | Linking to GVCs is perceived by suppliers as the ultimate condition to remain in business although participation in GVCs is often associated with very strict requirements. |
| **Scientific and precision instruments (PI)** | |
| Australia | Although the SPIs firms interviewed did not have a high appreciation of the GVC, most firms benefited from being involved. High trust relationships established within the GVC allow firms to form temporary partnerships to increase services and attract 'problem solving' work which benefits original equipment and secondary manufacturers. |
| **Software** | |
| Turkey | The most important benefit of participating in global value chains for Turkish software developers is co-operation. Co-operation allows Turkish SMEs to improve their innovation and R&D abilities and to increase their export. Involvement in global value chains also keeps them informed of state-of-the-art technologies, developments in their industry and market. |

| Question / Case study | Benefits of being part of a supply/value chain |
|---|---|
| Egypt: Microsoft | The Microsoft partnership has been instrumental in enabling local companies to access regional growth opportunities and therefore become more integrated in the GVC, as opposed to being just a small local implementer. Many partners that have developed a successful relationship with Microsoft Egypt have used that network to implement Microsoft projects in other neighbouring countries. Microsoft has encouraged this expansion and has provided its trusted Egyptian partners with the necessary support (on technical and commercial fronts) to succeed in the regional markets. Microsoft benefits from this expansion in serving its customers in other Arab markets where resources are scarce and technical know-how is less developed. |
| **Tourism** | |
| Australia | The idea of greater participation in GVCs is not necessarily a high priority for most tourism operators in Australia. Although there is strong awareness of the immediate, first-hand interactions that connect particular businesses, there is little conception of the significance of the multiple linkages that occur along the entire length of these chains. |
| Germany/Jordan | Jordanian travel agencies can gain access to foreign markets. |
| Korea | In today's highly competitive business environment, SMEs are becoming aware of the importance of the value chain system for their competitiveness at both industry and company levels. |
| Poland | Lack of knowledge about the potential benefits hinders SME participation in value chains and also co-operation with large companies. |
| Spain (Andalusia) | To face competition pressure, travel agencies estimate that they should focus on offering a better quality product, with greater added value, in order to increase clients' fidelity. |
| Spain (Balearic Islands) | Enterprises believe they are in a leading position as a result of their specialisation, the quality of their service and their accumulated experience, and therefore do not intend to increase their role in the value chain in the sector. However, most of them admit that they are experiencing a loss in competitiveness due to the increased competition. |
| Switzerland | Travel agencies can increase their profitability through a more focused participation in GVCs. Hotels can reach a critical mass for marketing/branding, organise their reservation systems and streamline their purchases. |
| **Cinema** | |
| Korea | Participating in the GVC presents opportunities to the Korean SMEs, such as learning from advanced firms especially about content production and foreign market knowledge. SMEs believe that participating in the GVC is a necessary step to expand into global markets and gain value from their advanced knowledge about digital technologies. |
| United States | The opportunities for value chain participation by SMEs are substantial and expansive, but primarily in independent production and applications of new technology. While the decline of traditional production and distribution methods caused by rapid technological change leads to heightened volatility and uncertainty, it also leads to prospective gains by small, young, and restless enterprises as compared to the large legacy-bound companies. |
| Colombia: RCN and Caracol | Many companies consider international markets, especially the US and Canada, more attractive for animated products because of high demand and better price margins. |
| Nigeria: Nu Metro | Belonging to a GVC has created some advantages for the local subsidiary with such benefits of continental/global brand, capital, technology, and management. Nu Metro in turn is required to promote high standards of execution. |

*Source*: OECD country/industry case studies and UNCTAD enterprise/country case studies, 2005 - 2007.

## The role of government

As the globalisation of value chains presents both opportunities and challenges for SMEs, the case studies have tried to understand what SMEs' expectations are on the role, if any, governments could undertake to support them in the evolving environment. The following views emerged:

- Across countries, many enterprises interviewed indicated that governments at the local or national level have provided them with little or no support for facilitating their participation in global value chains. This answer reflects the fact that many SMEs have a limited understanding of the global environment and therefore cannot

easily identify policy initiatives facilitating their effective participation in GVCs. For instance, although the area of skill upgrading is certainly one of the most relevant for the successful integration of SMEs into GVCs, SMEs did not mention programmes in the field of SME training.

- In most of the case studies, two themes dominate SMEs' concerns:
  - The need to improve technology and innovation capacity.
  - The lack of adequate finance and human capital for this process.
- Other important concerns include: the capacity to respond to standards and certification requirements; the ability to better manage intellectual assets, including the protection of IPRs when appropriate (for instance, Box 4.9 illustrates policy initiatives for protecting IPRs in one developing country); the uneven bargaining power SMEs face with large contractors; and the support of diversification in activities to reduce dependence on one or a few customers.

Table 4.5 summarises the policy issues which emerged from the field work.

**Box 4.9. Protecting IPRs in the cinema industry: the case of Nigeria**

The case study on the cinema industry in Nigeria revealed a strong need to reduce a high level of IPR infringements and violations. It is estimated that over thirty five thousand video clubs in the country rent out local and foreign movies without authorisation. Piracy, especially counterfeiting suffered a setback in recent years because of the aggressive strategies of the Nigerian Copyright Commission. Major efforts aimed at strengthening the regulatory environment include:

- The approval of the Optical Disc Regulation under the Nigerian Copyright Commission.
- The establishment of the Motion Picture Council of Nigeria.
- The Nigeria In the Movies (NIM) initiative launched by the National Film and Video Censors Board.
- The Strategic Action Against Piracy (STRAP) initiative launched by the Nigerian Copyright Commission, under which vigorous anti-piracy raids have been undertaken, pirated goods worth billions have been seized and destroyed.
- The revamp of the Video Rental Regulation by the Nigerian Copyright commission to ensure all persons engaged in the business of rental, hiring, leasing, loaning comply with the guidelines and ensure that copyright-owners receive due compensation for the use of their works.

*Source*: UNCTAD country/enterprise case study on Nu Metro in Nigeria, 2007.

## Table 4.5.Policy issues: Insights from the field work

| Question / Case study | Policy issues |
|---|---|
| **Automotive** | |
| Australia | SMEs are concerned with increasing their innovation and R&D, flexibility and ability for just-in-time delivery and marketing.<br>They realise that their small firm size can inhibit their buying power, investment opportunities, and economies of scale. This is reflected in their heavy reliance on producing for the Australian auto industry due to undiversified operations.<br>SMEs face difficulties due to a lack of IP enforcement in low-cost manufacturing countries and a lack of skilled and willing workers. |
| Chinese Taipei | SMEs are concerned with increasing their reach in the international market while maintaining the quality of their service. They realise the importance in decreasing their costs in order to enhance competitiveness, yet need to continue developing new products and new markets to increase diversity and add value to the products.<br>SMEs seek assistance in acquiring certification from international automakers. |
| Japan | SMEs need easier access to an information infrastructure, namely for the collection of accurate information about the global business environment.<br>Also, the strengthening of in-house processing and production technology is one of the major difficulties confronting them. Policy recommendations for increasing SME participation in GVCs include: i) building an information infrastructure for the collection of accurate information about the business environment; ii) supporting SMEs through improving their technological capabilities; and iii) supporting cluster development (matching between SMEs in different fields, encouraging the provision of technical and management support from regional facilities such as universities and SME support organisations). |
| Spain | SMEs acknowledge investment in R&D and innovation to boost competitiveness and internationalisation as key to their growth. Among the central concerns of SMEs are the rising cost of production and their reduced access to finance for new business projects compared to their larger competitors. This translates to low investment in R&D, marketing and internationalisation. Also, SMEs have little interaction with universities and a low patenting rate. |
| Turkey | SMEs are concerned with increasing their investments, research and development and innovation efforts. They consider increasing production costs as a significant threat for them. |
| India: Tata Motors | SMEs need to improve their in-house technical capabilities, while maintaining the highest technical precision with efforts to reach a zero rate of rejection and honouring the delivery schedule.<br>SMEs need access to the latest technical information and venture-type financial support for R&D and new product development. |
| Mexico: Volkswagen | Local SME suppliers need greater support to undertake the learning process which allows them to meet global quality standards.<br>They realise the importance of R&D; however, at present first tier firms do not have R&D departments in Mexico. SMEs would like to be represented in the bargaining process with VW and to have the rights of the subcontracted businesses preserved. |
| South Africa: Toyota | SMEs are concerned with their ability to upgrade and respond quickly in order to deliver products and production systems that are in line with expectations of Toyota in terms of quality standards, supply standards, and delivery times.<br>SMEs draw attention to their need for increased skills development, investment, and technology development, as well as an increase in safety and security and improved infrastructure. |
| **Scientific and Precision Instruments Industry** | |
| Australia | SMEs risk a shortage of skilled labour as well as competition from emerging low-cost producers. This problem is linked with the lack of IP protection in low wage countries.<br>SME would like to see an increase in access to finance for investments, R&D, and marketing as well as a harmonisation of requirements for technical standards and regulatory compliance. |
| **Software** | |
| Turkey | The most compelling problem for SMEs is the availability and cost of qualified personnel. Other concerns point to insufficient infrastructure, difficulties of reaching global markets and financing R&D, capacity to stand competition with large firms, and piracy. |

| Question / Case study | Policy issues |
|---|---|
| Egypt: Microsoft | To expand their market and grow SMEs underline the need for a larger pool of qualified and skilled human resources, requiring a focused effort by the government in higher education. Capacity building activities for local companies to strengthen their management and technical capabilities would help equip them to compete more effectively.<br>SMEs consider that the general business environment needs to be improved through faster and more efficient governmental service delivery and the enforcement of stringent piracy regulations. |
| **Tourism** | |
| Austria | When clear market failures occur, it might be worthwhile for national/local public authorities to assist SMEs in planning their co-operation strategies with a view to optimise the service chain both on the supply and on the demand side or to upgrade the co-operation ventures at international level. |
| Germany/Jordan | Recommendations include: i) to protect the established value chain relationships between Jordanian and German SMEs from unexpected structural changes and political shocks; ii) to help SMEs diversify their offer in international markets; iii) to develop a policy in Jordan for upgrading the tourism destination to attract new investors (*e.g.* vocational training, investment regulation, infrastructure development, quality and standards); iv) to increase the coherence of tourism with other policies. |
| Korea | SMEs need support to modernise their professional management techniques in line with modern hotel management; upgrade information system and facilities and equipment; improve the level of service quality and standards; develop nation-wide and world-wide marketing networks; and strengthen the financial structure. |
| Poland | SMEs need support for modernising, including improvement of service quality, adoption of ICT, and innovation of business strategies such as new incentive-based personnel management systems and new marketing techniques. Companies should be encouraged to participate in networks and industry associations and to strengthen their competitive position through joint actions. |
| Spain (Andalusia) | SMEs would like to see simplified administrative procedures. Requests are for direct public support for ICT development, renewing of infrastructure or promotion of co-operation, although some SMEs see the role of public authorities more in designing the appropriate policy framework (standards and certification, infrastructure) or in creating an industry advisory board. |
| Spain (Balearic Islands) | SMEs consider it critical to pursue continuous improvement and innovation to face the fierce competition with international offer and compete with enterprises that have very different cost structures and that are able to set lower prices for products.<br>The request in terms of public aid focuses on the promotion and improvement of the tourism environment and the infrastructure, although many enterprises acknowledge that they have the financial means to afford certain actions aimed at improving their role in the value chain in their sector. |
| Switzerland | Tour operators consider that airport taxes are too high while at the same time recognising that this is the "price to pay" for good infrastructure and security. Travel agents are in need of support for vocational training. Hoteliers point out the necessity to increase their added value through innovation and infrastructure development but have difficulties to undertake action due to lack of financing. |
| **Film Production and Distribution Industry** | |
| Korea | SMEs' concerns focus on short- term development and lack of infrastructure. They would like to see public investment used wisely and not just for large firms since that could undermine the balance of development and growth essential for global competitiveness.<br>The IT cluster should play an important role. For example it could be used as an opportunity for creating new value-adding businesses. |
| United States | In order to remain independent, SMEs should continue developing new innovative technology. For this they need access to finance and to improve marketing and distribution expertise. Funding may become a real problem due to the long-run trend of increasing costs of production and capital. |
| Colombia:<br>RCN and Caracol | SMEs would like to have a more business friendly environment, including tax benefits for technology acquisition; an ease of travel restrictions for business purposes; an ease of restrictions on foreigners working in Colombia that hinder a firm's business development; greater promotion of local talent; and promotion of English language communication skills that facilitate companies' linkages with international TV channel and networks. |
| Nigeria: Nu Metro | SMEs suffer from the lack of basic infrastructure which has led to high costs of doing business. Promotion of FDI, local investments and tax breaks would improve these financing difficulties.<br>SMEs would like to see greater efforts to improve the regulatory environment, *e.g.* IP infringements and piracy; and to improve enforcement as prosecution is slow and cumbersome. |

*Source*: OECD country/industry case studies and UNCTAD enterprise/country case studies, 2005-2007.

# Notes

1. Traditionally, the analysis of industrial clusters is concerned with the role of local linkages in generating competitive advantages for firms in the cluster. Conversely, the global value chain literature emphasises cross-border linkages between firms in global production and distribution systems.

# Chapter 5. Conclusions and Policy Recommendations

Although it is difficult to establish common trends in the diversified universe of SMEs, the case studies conducted in several OECD member and non-member economies provided some new insights on the performance of SMEs in global value chains. One result that stands out from the different findings across sectors is that successful participation in global value chains brings stability. Small firms that are able to remain in value chain(s) despite keen global competition, or SMEs that succeed in 'jumping on board' normally gain stability and even expand their business. This is often accompanied by the upgrading of technological and human capital, as a result of the greater exposure and facilitated access to information, business practices and technologies that SMEs experience in GVCs. Indeed, co-operation with the network appears a key factor in facilitating the upgrading process. Case studies in the automotive and tourism sectors indicated that co-ordination with upstream and downstream partners increases the chances of success of small firms in the value chain. This seems related to substantial benefits in terms of status, information flows and learning possibilities. Successful SMEs in GVCs acquire more autonomy from their larger counterparts and increase opportunities to grow further by leveraging on access to an extended network of partners and to superior technology and improved staff skills.

The increased opportunities for SMEs come with serious challenges in terms of managerial and financial resources, and ability to upgrade, to innovate and to protect in-house technology. When questioned on these issues, SMEs point to their lack of ability to support adequate R&D, training of personnel to comply with the strict requirements of product quality standards. Insufficient working capital, caused by delayed payments from international partners, is also a barrier to the participation in GVCs. Moreover, if upgrading a small firm's position in the value chain is possible, it is typically linked to the take-up of a larger and more complex set of tasks. In the case of a small supplier, this would include the manufacturing of a product or the provision of a service, as well as contributions to product development and organisation and monitoring of a network of sub-suppliers to ensure delivery and quality at competitive costs. The lack of SMEs' awareness of the complexity of the issues plays against their possibility of responding timely and effectively to the challenges of globalisation.

Governments could facilitate SME gainful participation in global value chains through policy initiatives in specific areas:

- ***Awareness-raising of the potential of participation in global value chains.*** Many SMEs that are used to serving local markets may find it difficult to gain a good understanding of the advantages and potential of subcontracting. This also applies to the potential for SMEs to subcontract abroad part of their production, in order to improve their competitiveness through rationalisation of resources. Although the diffusion of ICT has made market intelligence easier also for SMEs, their limited resources and lack of managerial capacities still hamper accurate information and analysis on the opportunities in foreign markets.

- ***Increasing participation in global value chains*** through initiatives such as the facilitation of SME consortia for joint marketing or for entering joint bids, particularly in government procurement, or promotion schemes for potential suppliers.

- ***Supplier financing.*** Gainful participation in value chains often requires substantial investments to acquire or develop superior production technologies and logistics systems, invest in human capital, or certify newly required standards. Moreover, suppliers normally receive incoming payments from their customers several weeks or even months after the delivery of orders and contract enforcement and collection of payments may be a significant challenge for an SME. Policies aimed at improving SMEs' accounts receivables and facilitating SME financing can help small subcontractors overcome liquidity problems, *e.g.* by contributing to the development of financial schemes such as factoring.

- ***Promotion of technological upgrading*** is critical in order to encourage SMEs to capture more value added from participation in global value chains. Policy in this area should aim to support training and capacity building via skill development programmes; promote partnerships between SMEs and organisations overseas that can develop or transfer technology, products, processes or management practices; and to facilitate the technological upgrading through various financial schemes, such as credit lines for upgrading.

- ***Insufficient protection of intellectual property.*** The protection of intellectual property rights is of high relevance to SMEs. As discussed, the insufficient protection of SMEs' intellectual property rights in international markets is already having harmful effects on those small subcontractors that experience unfair business behaviour by their customers. The negative impact is twofold. In addition to the direct damage created by deceptive business practices, small firms' incentives to innovation may well be reduced if appropriation of economic benefits is threatened. Governments should consider including provisions for technology transfer from small subcontractors to MNEs within the OECD Guidelines for Multinational Enterprises (MNEs). At present, these Guidelines only cover the transfer of technology and the need for protection of intellectual property rights from multinational enterprises to other partners, as it is considered that MNEs are the main conduits of technology transfer across borders (*Section VIII, Science and Technology*, OECD Guidelines for MNEs, Revision 2000).

- ***Harmonization of compliance procedures.*** The adoption of product and process standards has several well-known benefits for firms. It enables them to introduce new technology and integrate business practices that improve their overall performance. However, different and concurrent standards can become barriers to transmission of information and to trade. Also, the costs of compliance with standards are proportionally too high for small firms. The problem is aggravated when these firms have to cope with an increasing number of private standards set by customers in addition to mandatory ones. Governments should ensure that national certification systems do not impose an excessive burden on small firms and encourage SME participation in the standard-setting process. Initiatives such as group certification for small firms in local regions might also prove effective, if trust in the control mechanisms can be gained.

- ***Promotion of skills development.*** Effectiveness of aforementioned policy measures, to a certain degree, is contingent on having skilled human resources in SMEs. Participation in global value chains can accelerate SMEs' upgrading of human and technological resources, through technology and knowledge transfer and implementation of new business practices. Conversely, participation may be demanding as well, to the extent that a threshold of capabilities could be necessary to successfully enter value chains. Policies that aim at raising technical and managerial skills in SMEs can facilitate integration of these firms into global chains.

- ***Attracting foreign direct investment.*** FDI promotion policies may facilitate the integration of firms in global supply chains. Some policies can explicitly be designed to attract MNEs that would promote technology and knowledge transfer to local suppliers and subcontractors, whereas others may aim at helping established foreign affiliates to enter and/or upgrade into higher-value activities. After-care services for foreign investors are important and can influence them to develop business linkages with SMEs.

- ***Promoting the development of industrial clusters.*** Cluster initiatives allow for economies of scale and agglomeration and also help developing an experienced local pool of skilled labour and a network of firms co-operating in complementary areas of specialisation. By doing so, they strengthen their competitive advantages in a sustainable manner and become attractive sites for quality FDI. In many cases, the presence of MNEs becomes crucial to integrate clusters into GVCs, and to strengthen their export capacity both from the production and distribution point of view.

- ***Promoting the development of domestic industries and service networks in developing countries.*** Such networks would be able to link effectively with international production networks, by promoting entrepreneurship and enhancing competitiveness at firm level through technology and business linkages. This calls for using official development assistance (ODA) more effectively to support developing countries' efforts to undertake a wide range of proactive measures to promote trade and investment in an integrated way. At the multilateral level (WTO) it is necessary not only to promote a country's capacity for trade policy formulation and negotiation but also to enlarge the scope of Aid for Trade so that it assists countries to build their productive capacity.

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# Annexes

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# Annex A.
# Examples of Specific Country/Economy, Company and International Organisations (IOs) Support Programmes

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| **Raising SME awareness of the opportunities for participating in global value chains** | |
| *Facilitating access to accurate information on market opportunities for subcontracting and on potential foreign partners* through market reports and data bases, trade fairs, exhibitions abroad and electronic trading platforms or subcontracting exchanges. | • **Canada's** Trade Commissioner Service provides enterprises that have selected their target markets with market reports and access to offices in cities abroad. www.infoexport.gc.ca<br>• The **Czech Republic** maintains a database of exporters that can be used during trade fairs and exhibitions as well as a website of enquiries, tenders and offers. In case of a specific demand, the foreign enterprise is given a list of potential Czech suppliers. www.czechtradeoffices.com/en/services/<br>• **Japan** subsidises strategic IT use by SMEs by funding their expenses to adopt EDI systems and IC tags in order to allow SMEs to engage in B2B.In addition Japan provides a data base of market reports, regulations, trade fairs and other information on trade and investment. www.chusho.meti.go.jp<br>• **Mexico's** Programme for Commercial Missions organises commercial missions abroad and gives systematic training to enterprises on establishing contacts with foreign buyers. www.contactopyme.gob.mx/informacion/sempresario/Exportación/asosocons<br>• **New Zealand's** Market development Assistance scheme assists firms to undertake strategic international market development activities such as market visits, in-market advertising, and attendance at trade fairs. The Beachhead Programme assists companies in specific sectors to establish a presence in export markets. www.nzte.govt.nz/section/14492.aspx; www.exportyear.co.nz<br>• **Slovakia** uses Euro Info Centres sponsored by the EU Commission to facilitate contacts for Slovak SMEs in the EU countries. http://ec.europa.eu/enterprise/networks/eic/eic-geo-cover_en.html<br>• **Turkey** provides extensive support to enterprises to participate in national and international trade fairs as well as to undertake specific export business trips abroad. www.igeme.org.tr/introeng.htm |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| | • **RosettaNet**, an example from the business community, is a non-profit organisation that seeks to implement a protocol enabling enterprises to overcome the barriers to conduct business over the Internet by establishing a global language for e-business. http://portal.rosettanet.org/cms/sites/RosettaNet<br><br>• The **Business and Industry Advisory Committee (BIAC) to the OECD** is in the process of putting in place the BIAC SME Web Portal that will provide SMEs with information and contacts they need to help support their internationalisation. www.oecd.org/dataoecd/7/39/38941792.pdf http://biac.org/smeportal/ |
| *Encouraging SMEs to call in external consultants* for the implementation of feasibility studies and market research in order to support FDI. | • **Austria** has a government grant instrument, the Austrian Study Fund, which allows for these types of studies. www.aba.gv.at/en/pages ; www.awsg.at |
| *Encouraging SME investment* by facilitating companies' efforts to expand their business globally through information services or other means. | • **Austria** employs investment promotion programmes which provide guarantee facilities to protect SMEs against failure of FDIs as well as low-interest facilities. www.aba.gv.at/en/pages/; www.awsg.at |
| *Facilitating information flows* (including information sharing about needs between upstream and downstream partners) throughout the entire GVC and in particular encouraging MNEs to share their road-map in terms of future product and process development with their SME partners | • **Japan** supports organisations involved in the formation of networks between upstream and downstream sectors in order to increase SME opportunities to obtain information to enhance competitiveness and collaboration between members of GVC. www.meti.go.jp/english/policy/FY2006keypoints.pdf<br><br>• **Malaysia**'s SME Business Coaching Programme links SMEs with MNEs that coach their SME partners so that they can better position themselves to meet changing demands. www.psdc.com.my/article.cfm?id=622 |
| **Increasing SME participation in global value chains through collective action and co-operation** | |
| *Supporting the establishment and development of branch groupings* (*i.e.* clusters) on regional, cross-regional, or cross-border levels. | • The **Czech Republic** gives grants for infrastructure enabling multi-sectoral groups to establish a cluster. www.czechinvest.org/en/partnership-opportunities<br><br>• **New Zealand's** Enterprise Networks Programme helps groups of businesses build business capability and/or undertake international market development activities www.nzte.govt.nz/section/11736.aspx; www.exportyear.co.nz |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| *Facilitating SME consortia jointly to bid, produce and market*, particularly in relation to government procurement programmes. | • The **United States** National Aeronautics and Space Administration (NASA) promotes such consortia including SMEs and MNEs. http://export.gov/ www.sba.gov/ www.sba.gov/advo/ (other associations not related to the US government but equally helpful addressing these points are: www.nam.org/s_nam/index.asp; www.ism.ws/; http://ctl.mit.edu/ |
| *Promoting clusters and networks* to improve SME participation in GVCs through fostering and strengthening links at local level between universities, research institutions, laboratories and SMEs including for example, funding cooperative research programmes. | • **Australia's** Intermediary Access Program supports the Innovation Xchange and the Australian Institute for Commercialisation which are intermediaries expert in linking SMEs with both public researchers and MNCs. www.nml.csiro.au/content/itrinternet/cmscontent.cfm?objectID=4158E232-C7B5-CC76-7DBB3B56432F21FD<br>• **Austria's** Protec 2002+ facilitates the transfer of technology from external sources to SMEs, diffuses new innovative management tools and sets up networks to raise the level of innovation in SMEs. http://cordis.europa.eu/erawatch/index.cfm?fuseaction=ri.content&topicID=64&countryCode=AT<br>• **Japan** has funded Industrial Cluster Projects which set up networks between SMEs, government, institutions, laboratories and universities. www.meti.go.jp/policy/local_economy/downloadfiles/Business_environment_prom_div/0409gaiyoushi%20eng.pdf<br>• **Mexico's** National Network of Productive Associations establishes horizontal and vertical links between SMEs, governments, institutions and intermediate organisations. www.concamin.org.mx<br>• The **World-Class New Zealanders** programme connects high potential New Zealand-based businesses and sectors with internationally-recognised experts in relevant areas for business growth. www.nzte.govt.nz/section/11774.aspx; www.exportyear.co.nz |
| *Targeting support for clusters in selected technologies,* particularly where there is substantial potential in knowledge-intensive and export-oriented market segments and for supporting R&D for continuous innovation. | • In **Canada's** Technology Clusters Initiative the National Research Council stimulates the growth of world-class technology clusters by putting its leading-edge research to work in innovative communities across Canada. www.nrc-cnrc.gc.ca/clusters/initiatives_e.html<br>• **Greece** has created the Hellenic Technology Clusters Initiative which fosters clusters that can compete at an international level, attract FDI and develop a value-added services market. www.htci.gr/home.html<br>• **Mexico** uses its National System of Business Incubators to support intermediate and high technology SMEs. www.contactopyme.gob.mx/snie/VEng/PrincipalSNIE.asp<br>• **Slovakia** has established technological incubators and business incubators where start-ups are given suitable infrastructure, consulting and training support for 3 years. www.unipv.it/ester/downloads.html<br>• **Brunei Darussalam's** Business Incubator Programme targets SMEs in four sectors (agriculture, fisheries, manufacturing and services)[1]. |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| *Promoting business linkages between MNEs and SMEs* through identifying and matching potential partners while ensuring diversification of partners to avoid becoming dependent on one partner. Helping SMEs to develop their negotiating capacities and skills with MNEs through institutional support (awareness building) and training measures | • **France's** Partenariat is a public-private partnership based on piggy-backing ("portage" in French) involving the active role of MNEs assisting SMEs to overcome barriers to their internationalisation. www.partenariat-france.org<br>• **Mexico's** National Programme of Supplier Development supports strategic alliances between large and small enterprises. www.contactopyme.gob.mx/pdp/index.html<br>• **Malaysia's** SME Business Coaching Programme, run by the Penang Skills Development Centre, matches SMEs with potential with MNEs. www.psdc.com.my/article.cfm?id=622 |
| *Facilitating supplier development programmes,* where SMEs are coached and mentored in key areas such as design and production engineering (this includes sending in technical teams to advise on upgrading). | • **Australia's** Industry Capability Network Limited/Supplier Access to Major Projects helps maximise opportunities for Australian suppliers to be part of major domestic projects and global supply chains. www.icn.org.au/au/Default.aspx?tabid=71<br>• **India's** Tata Motors is an example of a company programme that mentors SMEs. www.tatamotors.com/ |

**Promoting the capacity for innovation by local SMEs**

| | |
|---|---|
| *Supporting training and capacity building via skill development programmes* so that SMEs can acquire the specific technical and business skills required to partner with MNEs. | Many countries have programmes that offer business services and training to SMEs:<br>• The **Czech Republic's** Inovace II builds managerial and technical skills needed for upgrading. www.mpo.cz/zprava17311.html<br>• **Mexico's** Business Development Centres Network—particularly CDE's Plus provides services to innovative investment projects. www.contactopyme.gob.mx/servicios/Informacion/Programas/Cent_des_emp<br>• **Portugal's** programmes, INOVJovem and INOVContacto assist SMEs to acquire skills to increase their capacity for innovation. www.inovjovem.gov.pt/presentationlayer/primeinov_ctexto_01.aspx?localid=2&area=8 and www.networkcontacto.com<br>• **Turkey's** KOSGEB pays for consultancy services and training for SMEs from approved business service providers. www.kosgeb.gov.tr<br>• **Brunei Darussalam's** Entrepreneurship Development Program provides entrepreneurship orientation, skills training, and fosters SMEs capabilities for intra-firm networking and linkages. www.sbaer.uca.edu/research/icsb/1998/pdf/115.pdf<br>• **Kenya's** Micro, Small and Medium Enterprises Competitiveness Project provides SMEs with business services and training to improve performance at critical points in the GVC. [2] |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| | • **Malaysia** has created the Penang Skills Development Centre that provides specialised training in basic engineering, business administration, microelectronics, photonics, and telecommunications which meets the needs of local and foreign enterprises. www.ilo.org/public/english/employment/skills/hrdr/init/mal_5.htm<br><br>• **Vietnam** is being assisted by GTZ to improve business development services for quality management and production, meeting standards, marketing and design and trademark and brand development. www.gtz.de/en |
| *Facilitating the technological upgrading of products and processes* through providing access to information on world best technologies and processes and various financial support measures. | Financial innovations which facilitate such upgrading are found in a number of programmes:<br><br>• **Greece** provides financial support to SMEs in the area of industrial subcontracting to help them modernise their productive processes, improve know-how and adopt innovative methods. www.eommex.gr/index2.htm<br><br>• **Japan** has initiated a Global Fund for SMEs that seek to internationalise. In addition Japan has an advanced financing programme that provides unsecured loans to SMEs. www.apu.ac.jp/rcaps/modules/librarypages/content/RCAPS_Occasional_Paper_07-1.pdf<br><br>• **Poland's** Structural Funds Assistance provides grants for advisory services that facilitate upgrading by firms and or industrial parks/incubators. www.funduszestrukturalne.gov.pl/English/<br><br>• **Turkey** provides financial support to enterprises to engage in product development within the context of its technology centres and incubators. It funds common use workshops and laboratories for the commercialisation of new products and processes. It also supports qualified personnel to work within enterprises to upgrade technology. www.investinturkey.gov.tr/cms/index.php?a=219<br><br>• **Brunei Darussalam's** Enterprise Facilitation Scheme provides financial support to SMEs to upgrade their business operations.[3] |
| *Promoting partnerships between SMEs and organisations overseas* that can develop or transfer world-leading technology, products, processes or management practices. | • The **UK** Department of Trade and Industry facilitates such partnering through its Global Watch Technology Partnering. |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| **Enhancing SMEs' value obtained from intellectual assets and intellectual property (IP)** | |
| Promoting enhanced intellectual asset-based management by SMEs and developing systems to value intellectual assets adequately. | • **Japan** has issued the Intellectual-Assets-Based Management Manual and held an SME Intellectual Asset-Based Management Workshop. www.meti.go.jp/policy/intellectual_assets/english.html |
| Raising awareness about the nature of IP rights and how they benefit SMEs. | • The **Australian** Patents Office (IP Australia) produces various publications, fact sheets and resources on its website, to promote public awareness and education of the importance, value and strategies involved in IP protection and commercialisation. The 'IP Toolbox' and 'Smart Start' are products directed specifically at the needs of SMEs. As appropriate, IP Australia also conducts seminars and other related activities. www.iptoolbox.gov.au and www.ipaustralia.gov.au/smartstart/index.htm<br>• The **Canadian** Intellectual Property Office has a series of outreach products and activities aimed at increasing IP awareness among SMEs. http://cipo.gc.ca/<br>• **Hong Kong, China's** Intellectual Property Department organises events to help SMEs understand the importance of IPRs as a an intellectual asset management tool and educates them in the proper management of software assets. It conducts annual benchmark surveys to evaluate the change in IP awareness. www.ipd.gov.hk/eng/home.htm<br>• **WIPO's** Best Practice programme identifies successful mechanisms for making IP rights more accessible and relevant to SMEs. www.wipo.int/sme/en/best_practices/index.htm |
| Facilitating the filing of patents by SMEs. | • **Turkey** funds the expenses of enterprises for one year to obtain a patent, a certificate or registration within or outside Turkey. www.kosgeb.gov.tr |
| Preparing guidelines to encourage fair transactions and fair treatment by MNEs of IP developed by SMEs. | • **Japan** has issued Guidelines for the Prevention of Unintended Outflow of Drawings of Metal Moulds or Metal Mould Processing Data as well as a report by the Committee on the Establishment of Guidelines for Transactions in the Formed and Fabricated Materials Industries to prevent the unauthorised use of IP particularly by companies that use metal moulds. (link not available)<br>• Through business codes of practice, including in the **OECD Guidelines for MNEs**. www.oecd.org/topic/0,3373,en_2649_34889_1_1_1_1_37439,00.html |
| *Providing SMEs with the legal means* to adequately protect their IP rights in the international markets. | • **Austria's** Innovation Protection Programme (IPP) supports SME to protect and use their IP in emerging markets. http://ec.europa.eu/enterprise/calls/files/06_060/counterfeiting.pdf<br>• **Portugal** has formed a National Network of Units for Industrial Property Promotion to foster industrial property promotion actions aimed at strengthening the competitiveness of Portuguese enterprises. www.wipo.int/edocs/mdocs/sme/en/wipo_smes_ge_03/wipo_smes_ge_03_7.pdf<br>• **Japan's** project to Promote Countermeasures Against Pirated Products is establishing offices in major Asian cities to collect information, to support lawsuits and to survey cases of IPR violations. www.npa.go.jp/safetylife/seikan36/20070308.pdf |

| Categories of support | Country/ Economy or Company or IOs Examples |
|---|---|
| *Encouraging SMEs participation in negotiations for IP rights* in the establishment of treaties or international agreements. | • The **Australian** Patents Office (IP Australia) seeks to represent Australian interests in such negotiations as they relate to industrial property matters. www.ipaustralia.gov.au<br>• **Mexico's** Institute of Industrial Property represents and promotes Mexican interests in such negotiations. www.impi.gob.mx/impi/jsp/indice.jsp |
| **Facilitating the adoption by SMEs of product quality and process standards** | |
| Providing information and professional training to implement product quality standards required for exports. | • **Mexico's** Impulsoras Programme provides tailor-made consultancies to inform exporters about technical specifications, regulations and quality requirements. PYMExporta Centres Network gives assistance to exporters to develop export projects taking into account regulations and product requirements in foreign markets. www.contactopyme.gob.mx/servicios/Informacion/Programas/Imp_ofe_exp<br>• **Turkey** provides support for expenses relating to product testing, certification and inspection**.** www.kosgeb.gov.tr<br>• **Brunei Darussalam's** National Accreditation and Standard Center provides training and experts in the area of food safety. www.bruneihalal.gov.bn/node/61 |
| Promoting the adoption of harmonised standards by MNEs in procurement procedures and the diffusion of that information to SMEs. | • **Australian Industry Participation Plans** require the diffusion of such information to SMEs. www.ausindustry.gov.au/content/content.cfm?ObjectID=16C58BE7-6DD7-40E4-A4DB9A052586AEB5&L3Keyword=customs%20import%20duty<br>• **Covisint** is an Internet hub launched by the auto sector to allow collaboration along the entire value chain by setting up a global exchange market place. www.covisint.com<br>• **RosettaNet** develops and promotes universal standards for e-business in global supply chains ensuring that one set of governance rules applies worldwide. http://portal.rosettanet.org/cms/sites/RosettaNet |

# Notes

1. http://industry.gov.bn/wps/portal/!ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4h3CwXJgFjGpvqRqCKOcAFfj_zcVP0gfW_9AP2C3NCIckdHRQD7VvB9/delta/base64xml/L3dJdyEvd0ZNQUFzQUMvNElVRS82XzBfRlY!?WCM_GLOBAL_CONTEXT=/wps/wcm/connect/MIPRSite/MIPRNewsArea/News%2C+19th+April+2007

2. http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/KENYAEXTN/0,,contentMDK:20225700~menuPK:356552~pagePK:2865066~piPK:2865079~theSitePK:356509,00.html

3. www.industry.gov.bn/wps/portal/!ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4g3MXYCSYGYxqb6kWhCjggRX4_83FT9IH1v_QD9gtzQiHJHR0UARcYNKA!!/delta/base64xml/L0lDU0lKQ1RPN29na21BISEvb0VvUUFBSVFnakZJQUFRaENFSVFqR0VBLzRKRmlDbzBlaDFpY29uUVZHaGQtc0lRIS83XzBfNFZVLzE3MjgyNA!!?WCM_PORTLET=PC_7_0_4VU_WCM&WCM_GLOBAL_CONTEXT=/wps/wcm/connect/MIPRSite+WCM/Financing+for+SMEs/

# Annex B.
# Case Studies: Coverage, Main Findings and Research Teams

## *Automotive industry*

| **Australia** |
|---|
| *Research team*: Australian Government Department of Industry, Tourism and Resources (DITR)<br><br>*Coverage*: Australian automotive SMEs based in Victoria and supplying one or more of the four multinational car manufacturers based in Australia – Ford, Toyota, Holden and Mitsubishi. Overseas suppliers to the GVCs of these manufacturers and vehicle distributors are not included.<br><br>*Main findings*: SMEs recognise that their international competitive advantage lies in high quality, high-tech, specialised products, not in high volume, low cost, standardised production. As a consequence, enterprises at both ends of the Australian automotive sector have become keenly aware of the ways in which GVCs operate and where they fit within them.<br><br>*Reference:* Document CFE/SME(2005)16 |
| **Chinese Taipei** |
| *Research team*: Ministry of Economic Affairs<br><br>*Coverage*: The study covered both SMEs involved in production and in after-sales services shops.<br><br>*Main findings*: The case study focuses on strategies to boost the competitiveness of the Chinese Taipei's auto parts and components makers. These are found in the uptake of ICT technologies and the diffusion among agents in the sector of B2B practices. As the internal market is too small to achieve economies of scale, SMEs in Chinese Taipei would gain by specialising in customised and instant production and thus participating in global value chains as specialised/niche suppliers for foreign automakers.<br><br>*Reference:* Room document No 7, 28th WPSMEE Session, 6-7 June 2006, Paris |
| **Japan** |
| *Research team*: Ministry of Economy, Trade and Industry, Organisation for Small and Medium Enterprises and Regional Innovation in Japan<br><br>*Coverage*: The study focuses on the structure and characteristics of the Japanese automotive industry and surveys automotive parts makers in Japan and Japanese auto parts makers in some ASEAN countries (Indonesia, Malaysia, Philippines and Thailand).<br><br>*Main findings*: For SME companies, the path toward participation in the Japanese automotive value chain does not open up to them simply because they are located in the same region as the finished automobile factory. They must have also reached a level of quality, cost and timeliness demanded by the value chain, and deal with the fact that their own dynamic growth within the value chain relies on their ability to improve their own technological capabilities. For all tiers of firms, human resources development is a key issue; and for the smaller firms, technical, information and financial support is needed.<br><br>*Reference:* Room document No 9, 28th WPSMEE Session |

**Spain**

*Research team*: Sociedad Técnicos de Automoción, funded by Ministry of Industry, Tourism and Trade

*Coverage*: In-depth interviews were conducted with 14 companies in the automotive sector (6 large companies and 8 SMEs)

*Main findings*: Spanish SMEs have a very positive attitude about participating in global value chains and about the expected benefits. Need expressed for a technological upgrading, because firms fear of being excessively dependent of foreign technology, as it is the case at present. Indeed, the most serious problem Spanish companies confront is technological dependence on more technologically advanced countries, and this calls for government efficient support for SMEs in this area. SMEs are also concerned about protecting intangible asset, finance for new business projects and the management related to contracts and administration costs.

*Reference:* Room document No 10, 28th WPSMEE Session

**Turkey**

*Research team*: Research team from the Turkish Ministry of Industry and Trade.

*Coverage*: 18 SMEs and 4 vehicle manufacturers have been interviewed. The Component Manufacturers Association (TAYSAD) and Automotive Manufacturers Association (OSD) contributed to the study.

*Main findings*: Turkish SMEs serving automotive industry achieved a significant progress in involvement in the global value chain (GVC), having contribution to GVC through R&D, patents, innovation, etc. Most of the interviewees stated that they are satisfied with their position in GVC, however still need governmental support to increase their role. Most of the SMEs complain about high tax rates, social security premiums and difficulties in export and import procedures.

*Reference:* Room document No 6, 28th WPSMEE Session

## *Scientific and Precision Instruments industry*

**Australia**

*Research team:* Australian Government Department of Industry, Tourism and Resources (DITR)

*Coverage*: SMEs classified under manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes. These include SMEs engaged in: the manufacture of drawing; mathematical calculation; air navigation; surveying; oceanographic or hydraulic instruments; seismometers; or ultrasonic instruments. The study does not include SMEs manufacturing medical or surgical instruments, or optical devices.

*Main findings*: Precision instrument manufacturers do not seem to need close interactions with component suppliers, despite the steadily advancing improvements in instrumentation. Outside of distribution, Australian companies engage in little direct collaboration with other enterprises either domestically or internationally. Overall, the awareness among enterprises of operating within a GVC is low, but some firms plan to increase their role in GVCs.

*Reference:* Document CFE/SME(2005)16

## *Software industry*

**Turkey**

*Research team*: Turkish Ministry of Industry and Trade, Export Promotion Centre of Turkey (IGEME) and State Planning Organisation (DPT).

*Coverage*: Out of 120 questionnaires issued in Ankara CyberPark Technology Development Zone, 52 were returned. All the companies that participated to the survey are SMEs.

*Main findings*: Software companies' link in value chains within themselves have been getting strong with global software ecosystem. Export is constantly increasing. Experienced companies in certain fields have gradually grown their export starting from close region, such as Middle-East, Turkish Republics, Caucasus and Europe. The number of companies which do R&D in the field of software are increasing. Approximately, 20% of enterprises in the software industry have R&D centres in Technology Development Zones. Basic problems of sector are the following: qualified personnel, venture capital, piracy and difficulties of reaching global markets.

*Reference:* Room document No 5, 28th WPSMEE Session

## *Tourism industry*

| **Australia** |
|---|
| *Research team*: Australian Government Department of Industry, Tourism and Resources (DITR)<br><br>*Content/Coverage*: The study focuses primarily on three distinct types of hotel accommodation (chain hotels, boutique hotels, and other accommodation, including hostels and Bed & Breakfasts), in four areas of the Gold Coast. (Gold Coast Airport and surrounds; the Lamington and Springbrook National Parks and surrounds; Surfers Paradise and surrounds; and the theme parks of Sea World, Warner Bros Movie World, Wet 'n' Wild, Dreamworld and surrounds).<br><br>*Main findings*: Large MNEs, foremost hotels and airlines, are significant investors in Australian tourism and have raised the profile, appeal and accessibility of specific locations. These large firms are not well connected to SMEs. Australia's tourism industry is dominated by SMEs, and for these firms local and international personal networks drive activity more than business relationships across national borders.<br><br>*Reference:* Document CFE/SME(2005)16 |
| **Austria** |
| *Research team*: Austrian Bank for Tourism Development<br><br>*Coverage*: The study is based on an analysis of the co-operation projects funded in the framework of a Tourism Promoting Scheme made available by the Austrian Federal Ministry of Economics and Labour, on the results of a Questionnaire addressed to the Managers of active co-operation ventures within the Austrian Tourism sector, on structured interviews of industry experts as well as on the results of an analysis of the annual accounts of already active cooperation ventures<br><br>*Main findings*: Successful co-operation ventures show a number of specific characteristics, such as the legal form, the intensity of the co-operation and the internal organisational structure. A large majority of these ventures represent the classical pattern of horizontal co-operation.<br><br>*Reference*: Successful alliances in the Tourism sector - Why Participation in Co-operation Schemes increases Profitability Preliminary Outcomes of the Austrian case study Room document No. 8, 77th Session of the Tourism Committee, Rome 22 June 2006. |
| **Germany/Jordan** |
| *Research team*: Co-operative research project between German and Jordanian research teams from the University of Jordan and the University of Frankfort am Main, funded by the German Research Council (DFG) and the German Federal Ministry of Co-operation & Development.<br><br>*Coverage*: In-depth personal interviews were carried out with a total of 43 Tour operators, 6 of these in Austria, mostly independent medium-sized and small operators of regular Jordan packages as well as some occasional providers. Structured interviews were carried out with incoming agencies in Jordan, with hotel managers, airline managers and representatives of Jordanian tourist authorities.<br><br>*Main findings*: The study identifies the key factors to ensure that the firms operating in the specific market niche of package tours from Germany to Jordan maintain their competitive advantage.<br><br>*Reference:* Co-operation in specialised package tours tourism from Germany to Jordan, Room document No. 9, 77th Session of the Tourism Committee, Rome 22 June 2006 |
| **Korea** |
| *Research team*: Kyunghee University, Sejong University and Ministry of Culture and Tourism, Korea.<br><br>*Coverage*: The survey for hotels was conducted through in-depth interview during 2 weeks period from July 18 to July 30, 2005, with general managers and department heads in total 16 hotels which included 7 large hotels and 9 1st ~3rd tourist hotels. The survey for travel agencies and tour operators was conducted through in-depth interview during 4 month period from December 1, 2005 to March 30, 2006, with managers and CEOs in total 11 travel agencies and tour operators.<br><br>*Main findings*: The focus of the study is the offer of a tourism product by a "network" of actors, including hotels, travel agencies, tourism-related associations and public government at the local level. Overall, there is a negative perception of the impact of global competition on SMEs.<br><br>*Reference:* Document CFE/TOU(2005)11; and Room document No. 6, 77th Session of the Tourism Committee |

**Poland**

*Research team*: Instytut Turystyki w Krakowie (the Cracow Tourism Institute), Ministry of Economy, Department of Tourism

*Coverage*: 21 hotel enterprises and five entities (2 travel agents, 1 SPA and 2 local governments) from the domestic hotel industry and its environment were selected for the interviews, usually with top level executives. All the hotels that participated in the survey were SMEs.

*Main findings*: Lack of knowledge about the potential benefits hinders SME participation in value chains and also co-operation with large companies. International, regional and local competition is going to force actions, especially in personnel training and cost reduction. Networks created for the promotion of particular products have a chance to develop on a local or regional scale. The necessary co-operation is not developing since there is suspicion in participating in networks together with competitors. SMEs are practically invisible in innovation networks, associations of producers of various tourism products, tourism clubs, and Internet networks.

*Reference:* Room document No. 10, 77th Session of the Tourism Committee

**Spain (Andalusia)**

*Research team*: Research Team from the University of Seville.

*Coverage*: 4 hotel establishments and 3 travel agencies, located in the provinces of Malaga and Seville. Interviews took place with the owners and/or directors of the hotels and travel agencies. The study also benefited from the collaboration of the President of the Andalusian Travel Agencies (FEAVV, the Seville Entrepreneur Association of Travel Agencies (AEVISE), and the Vice-President of the Seville and Province Hotel Association (AHS); they presented the view of their respective subsectors and complemented the individual contributions from the firms.

*Main findings*: Intermediaries such as tour operator, booking centres, and traditional or virtual travel agencies exert a high pressure on hotel prices, although intermediaries usually do not fulfil the quota reserved to hotels in the individualised contracts they signed with them. To reduce uncertainty, some hotels are part of a hotel association, which increase their commercial potential in exchange for quota and commission per room. Travel agencies estimate that they should focus on offering a better quality product, with greater added value, in order to increase clients' fidelity.

*Reference:* Room document No. 5, 77th Session of the Tourism Committee

**Spain (Balearic Islands)**

*Research team*: Centre of Tourism Research and Technologies of Balearic Islands (CITTIB) in co-operation with the Balearic Ministry of Tourism

*Coverage*: The sample comprised 25 enterprises and 18 enterprises responded to the survey which covers 4 large, 8 medium and 6 small enterprises. Members of the Board of Directors of enterprises were interviewed in every case.

*Main findings*: In terms of products, a large number of Balearic enterprises are involved in many lines of business. This is the case for example of the travel agencies which are engaged in incoming and outgoing activities or of some of the large hotel chains which are also involved in the property market. This includes own services, the addition of spa or wellness centres in hotels, and extending the sports activities on offer (golf, cycle-tourism and trekking). These efforts are starting to produce very good results. Only large hotel groups are able to belong to several value chains, since their activities are both horizontally and vertically integrated. Many enterprises acknowledge that they have the financial means to afford certain actions aimed at improving their role in the value chain in their sector.

*Reference:* Document CFE/TOU(2005)8

**Switzerland**

*Research team:* Hospitality Research Department of the "Ecole Hôtelière de Lausanne".

*Coverage:* The sample comprised 20 enterprises from tour operators (multinationals, whose products cover among others the Swiss holiday destination), travel agencies (which distribute and sell products covering among others the Swiss holiday destination) and hotels (small and medium-sized hotels covering different existing products in Switzerland proposed in holiday packages).

*Main findings:* Small travel agencies face competitive pressures in terms of price they practice, catalogue, and ability to provide personalised assistance. Swiss hotel owners, mainly SMEs, work mostly with general tour operators, especially in large cities and ski stations; however, there is an increase in specialised trips to the mountains and lakeside. Trust is considered as essential between tour operators and hotel owners, especially because their respective objectives may differ (*i.e.* for the former, to have a maximum number of rooms during high season and a minimum during low season; and the latter to have a regular flow during the year). Hotel owners would like to give greater priority to businessmen during the low season and to this end, involvement in a global value chain could be helpful to them. In order to increase the value added to their product, hotel owners wish to renovate their infrastructure; however, in many cases, lack of financing delays this possibility. Information technology also plays an important role in sharing information between partners and increasing clientele.

*Reference*: Report "Chaînes de Valeur Globales Touristiques: Perception de trois types d'acteurs touristiques en Suisse"

## *Entertainment industry*

**Korea**

*Research team*: Korean Film Council, Policy Research & Development Department

*Coverage*: In-depth case studies of four Korean enterprises in the film production and distribution industry, three of them being the major film distributors in Korea.

*Main findings*: The study analyses the strategies for the young Korean cinema industry to grow and compete successfully in the international market. It is suggested that co-operation with foreign companies in the context of global value chains can only be possible if Korean companies are competitive. The current situation in the domestic market is close to an oligopoly, with few major firms dominating the market of film production and distribution. A more co-operative environment should provide SMEs more opportunities, including exposure to foreign firms and learning from them.

*Reference*: Document CFE/SME(2007)7

**United States**

*Research team*: The study was conducted by two consultancy companies, Vogel Capital Management and Christiansen Capital Advisors, New York.

*Coverage*: Several brief survey-interviews were conducted with professionals who regularly interact with US cinema and television SMEs in a variety of ways and from different perspectives, including commercial banks' movie lenders, digital effects companies, and intellectual property law experts.

*Main findings*: SMEs have a vital role in the value chain as producers and distributors along with the majors. Although the major studios have a dominant position of in Hollywood filmmaking, small and medium-sized businesses are essential to the industry's operation and occupy important niches in the filmmaking and distribution process. In particular, they satisfy a niche market for high-quality films that are not considered attractive by big studios.

*Reference:* Document CFE/SME(2006)14/REV1

## *UNCTAD Enterprise case studies*

**Tata Motor: India**

*Research team*: Centre for SME Growth and Development Finance (CESMED), Mumbai, India.

*Coverage*: The study was conducted on SMEs engaged in the manufacture of automotive components at Adityapur Industrial Area in Jamshedpur and the localised industrial zone in Pune, India. While most of the SMEs are ancillaries to Tata Motors Ltd., some of them have also become successful suppliers to other large industrial units in India and abroad. Responses to the questionnaires distributed were provided by 18 SMEs in Jamshedpur and 8 in Pune, respectively.

*Main findings*: SMEs do not feel the necessity of operating in a 'cluster' but felt the necessity of having world class infrastructure facility in the industrial areas. Their level of technical awareness and quality are quite high and competitive, their strengths are high quality and low costs, but their main weakness is that most are tied with one buyer. Those who have diversified their products and developed relationships with others including entering the GVC in time had better times even during recessionary period of the auto component industry.

*Reference*: UNCTAD report "Participation of Domestic SMEs to the International Production Chain of Tata Motors in India", 2006

**Mexico: Volkswagen**

*Research team*: Graduate School of Economics at UNAM (Universidad Nacional Autónoma de México)

*Coverage*: Between 2005 and 2006 a series of interviews based on a questionnaire were held with 8 Volkswagen first tier and second tier suppliers.

*Main findings*: It is very important to avoid dependence on only one contractor. In the case of Mexican suppliers for the automotive sector, the second-tier suppliers appear to be more competitive than first tier firms, because they serve more contractors and are specialised in more than one product. Other interesting finding is the co-operation established between some first tier supplier and their suppliers: they helped them upgrade so as to be included in the VW supplier database. First-tier suppliers consider their chances to stay and thrive in the chain if their system/network works well. In fact, first-tiers are more important as partners because they have developed other competencies such as developing product specifications or providing management advise to their contractor VW.

*Reference:* UNCTAD report "Assessing the participation of domestic SMEs to the international production chain of Volkswagen in Mexico", 2006

**South Africa: Toyota South Africa**

*Research team:* School of Development Studies, University of KwaZulu-Natal, Durban South Africa

*Coverage:* The firms selected for participation in the research project included 1 automotive OEM (Toyota South-Africa) 5 automotive components firms that had some level of supply relationship with the OEM and 1 automotive service sector company.

*Main findings:* When TSA, as well as other OEMs, started local operations, SMEs component firms, and in particular those that were not first-tier global quality operations, in having to supply into OEM plants manufacturing for export had to rapidly adjust to increasing quality requirements that come with the motor industries rigorous certification procedures, increased scale of production and flexibility. Whilst those that had been, or became, part of international operations could draw on a measure of global expertise many firms in the second and third tier supply categories needed to illustrate a rapid turn-around capability or face closure.

*Reference:* UNCTAD report "A perspective on SMEs and Global Value Chains in the South African Automotive Sector- Experiences from firms in KwaZulu-Natal Province", 2006

**Microsoft- Egypt**

*Research team:* CID, Management Consulting Department, Cairo, Egypt

*Coverage:* In addition to Microsoft Egypt, the companies selected for participation in the research project included three suppliers providing a service that complements an existing Microsoft product, thus vertically integrating into Microsoft's value chain, and three suppliers providing support functions to Microsoft, thus helping it deliver its final product.

*Main findings:* Egyptian partners have tremendously benefited from their association with Microsoft. However, the IT industry in Egypt is in dire need of qualified individuals, and therefore training people in the different ITS and ITES sectors should be the key priority for the Egyptian government. Additionally, many Egyptian companies are too small and lack the maturity to compete globally. Thus, capacity building activities for local companies to strengthen their management and technical capabilities, as well as initiatives aimed at strengthening IT associations and encouraging clusters, would help equip them to compete more effectively on the regional and international markets. Finally, the general business environment needs to be improved through faster and more efficient governmental service delivery, lower taxes (currently as high as 20%) and the enforcement of more realistic piracy regulations.

*Reference:* UNCTAD report "A Perspective on Egyptian Companies Contribution in the Global Value Chains in the Information Technology Sector- Experiences from Microsoft Suppliers", 2007

**Nigeria: Nu Metro West Africa**

*Research team:* Nigerian Copyright Commission, Lagos, Nigeria

*Coverage:* 14 local suppliers of Nu Metro, belonging to two GVCs, that of movie/cinema industry and that of optical disc production.

*Main findings:* Nollywood emerged as a spontaneous cluster not as a policy driven cluster that is triggered by the strong commitment of governmental actors. However, there are indications that government is now committed to reorganising the sector. This is manifested in certain key initiatives such as increased funding of organisations relevant to the sector, such as the Nigerian Copyright Commission, the National Film and Video Censors Board, the National Broadcasting Commission and the Nigerian Film Corporation. Nu Metro is the closest to an MNC affiliate, being a member of Johnic Communications, South Africa's leading entertainment and media company. It holds the monopoly for distributing Hollywood films. Its relationship with local suppliers in areas such as trust, disclosure, knowledge and transparency is not very open, since the group appears to have been designed to be self-supporting and self-propelled.

*Reference:* UNCTAD report "Assessing the Participation of Domestic SMEs to the Cinema International Production Chain in Nigeria", 2007

**Colombia: RCN and Caracol**

*Research team*: International Business Department, EAFIT University, Medellin, Colombia

*Coverage:* The firms selected for participation in the research project include different actors at different levels in the value-chain: 2 national TV channels, 2 national film producers, 3 transnational advertising agencies located in Colombia, 4 postproduction firms specialised in TV commercials and 5 3D-animation producers.

*Main findings:* In Colombia 3D-animation firms were established during the last 2-3 years, except one company that has existed for 7 years. This reflects the newness of the industry, even though the 3D-animation market is increasingly growing, and the international market (especially Canada and the US) is becoming a very important market for business development (some companies already have established offices in Canada and the US). The absence of an industry association and a general fragmentation of the 3D-animation market in Colombia causes problems of transparency of business practices, characterised by a lack of industry standards and (price) regulations, and a general attitude of non-cooperation among competitors. However, an initial cluster development can be observed - both in terms of geographical proximity and inter-firm co-operation. On the government side, the Colombian Export Promotion Agency (Proexport) just recently started to include service exports into their portfolio of advisory services.

*Reference*: UNCTAD report "A Perspective on Domestic SMEs in the Television International Production Chain in Colombia: the case of 3D Animation", 2007

# Annex C.
# Assessing the Productivity of Large Listed Enterprises[1]

As a complement to the analysis presented in Chapter 2, this annex investigates how productivity gains are generated and shared among different partners in a value chain. It is possible that productivity gains generated technically by one enterprise are *de facto* siphoned off by another, stronger in terms of its negotiating power. This hypothesis was supported by abundant interview material.

This annex provides complementary information on the evolution of productivity gains in large enterprises over recent years. In particular, it presents the results of comparisons of the levels of labour productivity achieved in large listed enterprises, mainly multi-national enterprises (MNEs), with the aggregate macro-economic productivity.

At macro-level, labour productivity is measured by dividing the gross domestic product (GDP) by a measure of employment or the labour force. In national accounting, the sector of enterprises is seldom decomposed by size, so that the levels of productivity are not calculated for different size classes of enterprises. In this perspective, surveys on the accounting data of various categories of enterprises may help in filling the blank. This annex uses the accounting information for the largest among the enterprises listed on stock exchanges. These enterprises are compelled by regulations to provide the financial market with adequate accounting reports on a regular basis. This information is collected, structured, stored and made available by financial databanks, such as Worldscope and Thomson Financial[2].

To the purpose of this annex, the company data of the 2 800 largest listed enterprises have been used to calculate or estimate value added per employee, *i.e.* labour productivity for the years 1995, 2000 and 2005. The annual accounts are reported by Thomson Financial in nominal US dollars. In most cases, the accounting figures at the enterprise level provide the five main components of value added (labour compensation, interest payments, depreciation, direct taxes and net profit). Where data were incomplete – especially for employment headcount - estimates have been extrapolated from existing information.

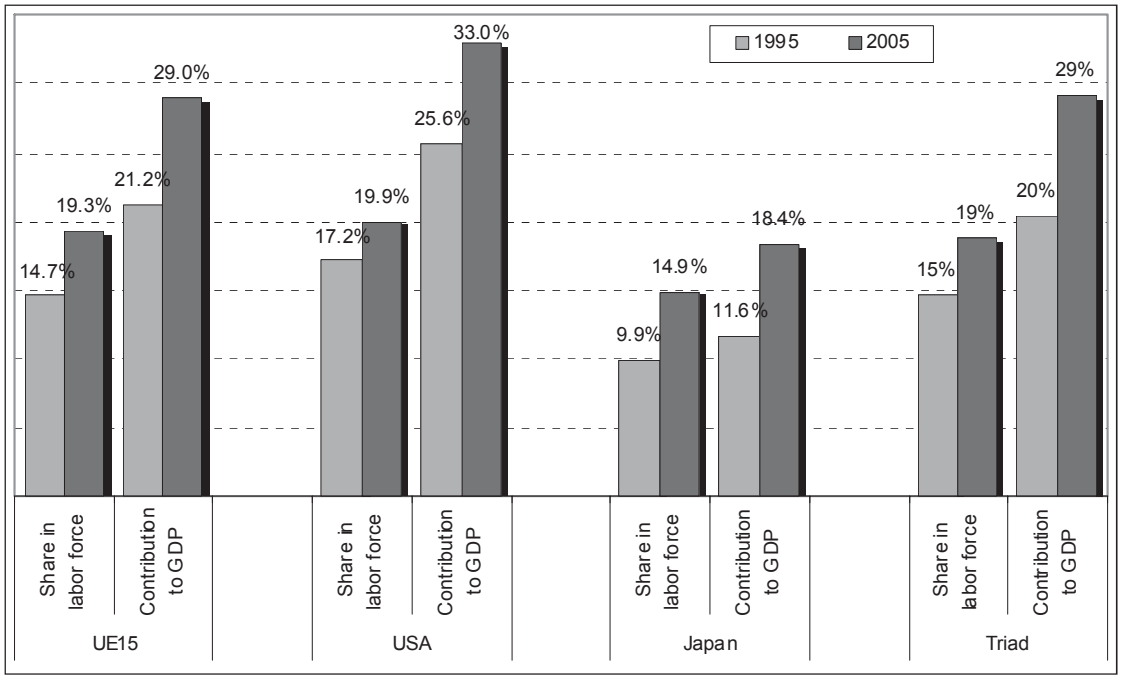
Once calculated for listed enterprises, labour productivity is then compared to the macro-economic productivity figures (nominal GDP divided by the labour force data from the World Bank database). The aim of this analysis is to provide an order of magnitude for differences in labour productivity. When assessing the results one has also to remember that the macro and companies data differ also in their geographic coverage: value added of multinational companies is generated by their employees all over the world, whereas the country's labour productivity is generated by the local employment only. It is also true that local as well as foreign multinationals are contributing to the country's GDP and labour productivity.

### *Macro-economic contribution of largest listed companies of the Triad*

From 1995 to 2005, employment in the largest 2 800 enterprises of the Triad - about 1 000 in EU-15; 1 000 in the United States and 800 in Japan – increased by more than 20 million persons, while their share in total labour force rose by 4%, from 15 to 19%. The increase of the employment share of the LE was significantly different among the members of the Triad: in Japan, their share increased from 10 to 15% of total labour force; in the EU-15 the increase was from 15 to 19%, while in the United States the observed increase was from 17 to 20%. In percentage, employment rose on average by 4.1% a year in Japan, 3.6% in EU-15 and 2.7% in the United States. Looking at the value added figures for the same period, the share of the 2 800 largest enterprises in GDP progressed by almost 10%, from 20 to roughly 29%. The highest relative contribution of LE is observed in the United States (Figure C1).

**Figure C.1. Share of employment and value added of the LE in labour force and GDP, Triad**

(1995 and 2005)




Source: Calculations by Dembinski and Bologna, University of Fribourg and University of Geneva, based on Thomson Financial data.

In all three regions of the Triad, the share of the largest enterprises in GDP progressed more rapidly than their share in the labour force. The labour productivity growth becomes evident when comparing the whole economy with the productivity achieved in the largest enterprises. From 1995 to 2005, labour productivity of the largest US enterprises increased by almost 70%, while the country's labour productivity lagged behind with an increase of 9%. In consequence, the 1 000 largest US enterprises may be the source of a significant part of the overall US economic growth. The same dynamics were at work in the EU-15, where labour productivity in large enterprises progressed by 44% in a decade,

while macro labour productivity (including the unemployed) decreased by 6% (in current US dollar terms). For Japan, available data cover only the years 2000 to 2005, but they indicate that the overall decrease (in US dollar terms) in labour productivity was slower in LE than in the whole of the economy. Today, the largest enterprises of the Triad achieve levels of productivity that are between 140% (Japan) and 290% (United States) of the region's average labour productivity.

Productivity increases may be used either to compensate labour (in accounting terms: higher employment cost) or capital (interest, depreciation or profits). During the last ten years, the share of labour related costs in total value added generated by the largest enterprises, as shown in Figure C3, decreased significantly only in Europe (from 54 to 44%), while remaining almost stable in the US (at 52%) and in Japan (around 35%). However, when these figures are analysed at per employee basis, data show that the share of labour related costs decreased both in the European and US large enterprises during the past ten years. Symmetrically, the share of capital remuneration (depreciation, interest payments and profits) increased on a per employee basis, from 45% to 54% of value added in Europe and from 53 to 58% in the United States. Compared to the year 2000, the share of capital remuneration in value added per employee in the largest Japanese enterprises increased from 74 to 84%. Considering profits alone, their share in value added per employee increased by ten percentage points in both Japan (from 6 to 17%) and in the EU15 (from 11 to 21%), while it remained stable around 17% in the United States.

### *Macro-economic contribution of largest listed companies in selected emerging economies*

Since 1990, the role of financial markets increased in many emerging economies as did the visibility of some of their large enterprises. Despite these developments, the availability of technically complete companies' reports is still limited. In consequence, the time horizon of the present analysis is limited to five years (2000-05) and covers three large emerging economies Brazil (130 companies), China (with Hong-Kong and Chinese Taipei, 280 companies) and India (240 companies). The analysed companies represent more than 50% of relevant market capitalisation.

In China and India, the contribution of the observed enterprises to GDP grew much faster than their share in employment. In India, LE share in labour force increased slightly to 0.5 % during the five years, while their contribution to GDP progressed by 3.5%, from 5.9 to 9.4%. In China, the share of value added in GDP of the 280 large companies increased by 4% to reach 13.4%, with an employment level in 2005 of only 1% of labour force, in progress by 0.4 % since 2000. In Brazil, the share in employment decreased from 1.4 to 1.2% of labour force, while contribution to GDP decreased also by 0.2%

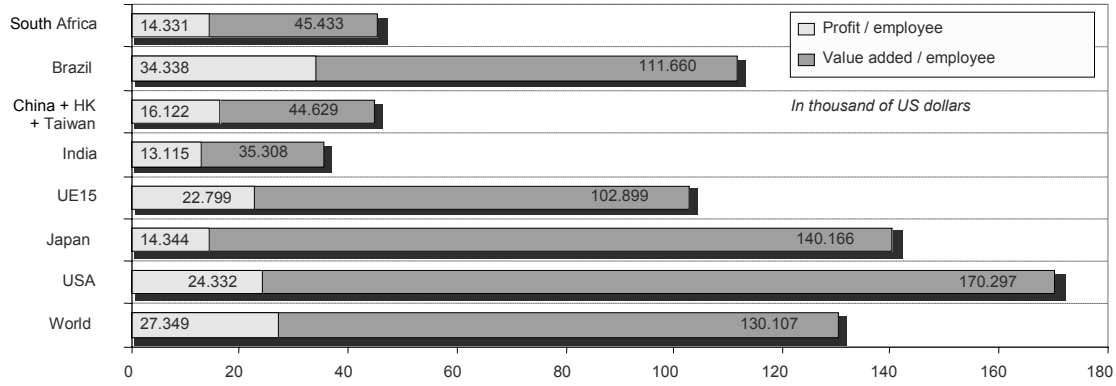
In India and China, the level of value added per employee of the large enterprise is 40 and 30 times higher than the country's average labour productivity; in Brazil, the ratio is "only" 10. The dynamics of value added per employee is also staggering, illustrating the driving role of the largest enterprises in terms of productivity.

### *Largest listed enterprises as growth enhancers*

The largest enterprises are, across the world and in each of its main regions, high-powered productivity engines. These enterprises – in most cases multinationals – are well equipped and brightly staffed so as to make the best out of combining globally the highest possible productivities achieved in each and every location. Despite this fact – which Dunning would call "internalisation capacity" - local conditions still matter as suggested

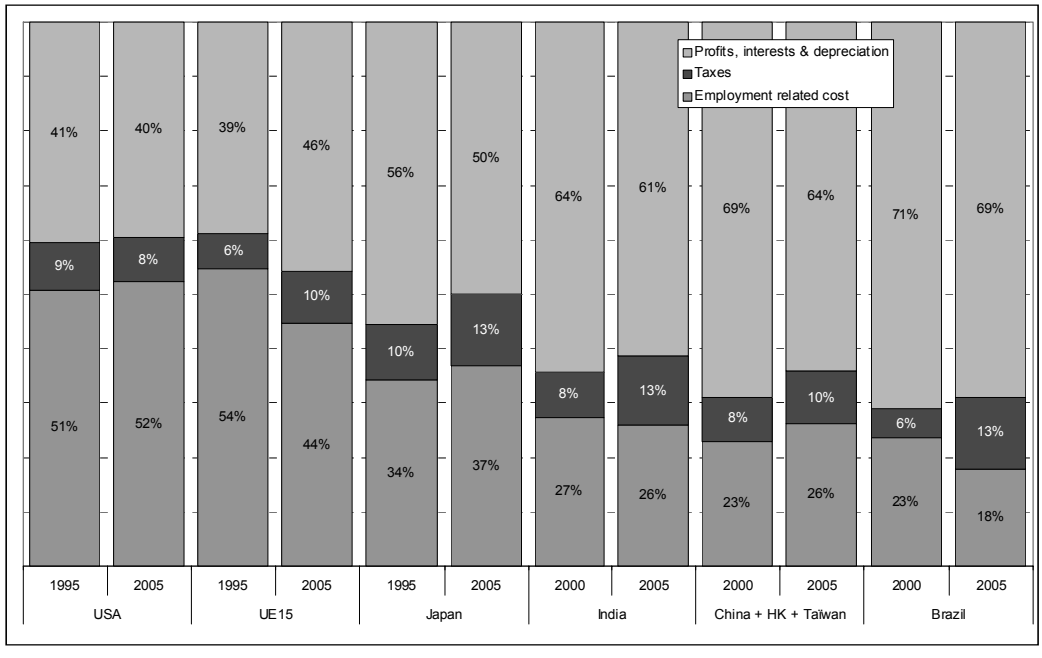
by the wide range of value added per employee levels achieved in different locations. The highest level (USD 170 000) is achieved by US multinationals; European firms generate per head 40% less value added, while Chinese and Indians are about 60% below the Europeans. Thus, an employee of a large Indian enterprise generates 20% of the value added created by his colleague in a US large enterprise. This being said, the dispersion narrows when net profits per employee are considered: highest in Brazil (34 000) and lowest in India (13 000), *i.e.* 38% of the former. The possible convergence of profit levels per employee may be explained to some extend by the growing integration of world financial markets and their global financial requirements[3].

**Figure C.2. Value added and profits per employee in the Triad and selected emerging economies**




Source: Calculations by Dembinski and Bologna, University of Fribourg and University of Geneva, based on Thomson Financial data.

**Figure C.3. Components of gross value added**




*Source:* Calculations by Dembinski and Bologna, University of Fribourg and University of Geneva, based on Thomson Financial data.

### *Concluding remarks*

Based on the analysis of the productivity of large listed enterprises, several factors may explain the extraordinary performance of these enterprises as compared to the rest of the economy composed mainly of non-listed, mostly smaller enterprises. These include:

- High capital intensity, or in other words a high level of equipment.
- The capacity of the largest enterprises to attract the most talented and productive members of the labour force.
- The high rate of innovation which confers the major players the possibility to reap market benefits of a 'first mover'.
- The pricing power with respect to the suppliers that allows large firms to harvest the economic gains achieved in other segments of the value chain.
- The pricing mark-up capacity on the final user market due to the ownership and development of strong brands and, more generally, of unique marketing capacities.

These factors bring to the fore hypotheses that deserve additional research.

## Notes

1. This annex was prepared by Prof. Paul H. Dembinski and Mr. Claudio Bologna, University of Fribourg and University of Geneva, Switzerland.
2. The authors express their gratitude to Thomson Financial for giving them access to the data for academic research purposes.
3. This is fully consistent with the findings of McKinsey, cf. Lowell, L. Bryan "New metrics of corporate performance: profit per employee" in *The McKinsey Quarterly*, 2007 no 1, pp 57-65, and also Lowell, L. Bryan and Zanini, Michele, "Strategy in an era of global giants" in *The McKinsey Quarterly*, 2005 no 4, pp 46-59.

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# Enhancing the Role of SMEs in Global Value Chains

The globalisation of production processes characterises the current phase of globalisation. Participation in global value chains (GVCs) can bring stability to small and medium-sized enterprises (SMEs) and allow them to increase productivity and expand their business. Co-operation with a network of upstream and downstream partners can enhance a firm's status, information flows and learning possibilities and increase the chances of success of small firms in the value chain. SMEs' involvement in value chains usually entails greater demands on their managerial and financial resources, however, and puts pressure on their ability to upgrade, to innovate and to protect in-house technology.

This OECD report analyses the impact, both positive and negative, of global value chains on SMEs. It identifies the ways in which governments, the business community, and international organisations can facilitate SMEs' gainful participation in global value chains through policies, practices and targeted support programmes.

The report presents the findings of case studies carried out in five industries (the automotive sector, scientific and precision instruments, software, film production and distribution and tourism). The proceedings of the Global OECD conference *Enhancing the Role of SMEs in Global Value Chains*, along with the *OECD Tokyo Action Statement for strengthening the role of SMEs in Global Value Chains*, which includes a full set of policy recommendations for governments, can be found on line at ***http://dx.doi.org/10.1787/472558038248***.

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