

Enhancing the Role of SMEs in Global Value Chains

Tokyo, 31 May - 1 June 2007



OECD BACKGROUND REPORT



OECD国際カンファレンス
「グローバル・バリュー・チェーンにおける中小企業の役割強化」
2007年5月31日(木)-6月1日(金)



経済産業省
Ministry of Economy,
Trade and Industry

FOREWORD

The OECD Working Party on SMEs and Entrepreneurship (WPSMEE) study on *Enhancing the Role of SMEs in Global Value Chains* focuses on the effects of the globalisation of value chains on small and medium-sized enterprises. Originating from a proposal made by the Swiss authorities, this study was taken up in the 2004 Istanbul Ministerial Declaration¹ 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*”. It has contributed to work on global value chains carried out by the Directorate for Science, Technology and Industry and submitted to the 2007 OECD Ministerial Conference Meeting as part of the background material.

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.

This document was prepared by Mme Mariarosa Lunati, 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 Ms. Fulvia Farinelli, Investment and Enterprise Competitiveness Branch, United Nations Conference on Trade and Development (UNCTAD). Mme Marie-Florence Estimé, CFE Deputy Director, supervised the preparation of the study. Mr. Alain Dupeyras, Tourism Unit of the SME and Entrepreneurship Division, developed input related to tourism issues, while Mr. Toru Ueno, SME and Entrepreneurship Division, supported the preparation of the Japanese input. Ms. Brynn Deprey and Mme Elsie Lotthé, SME and Entrepreneurship Division, provided research assistance and secretarial support respectively.

1. The Istanbul Ministerial Declaration on Fostering the Growth of Innovative and Internationally Competitive SMEs, OECD 2004.

TABLE OF CONTENTS

FOREWORD.....	1
EXECUTIVE SUMMARY	4
INTRODUCTION.....	9
1.1. The notion of value chain	9
1.2. Methodology of the study.....	11
2. PRODUCTION IN GLOBAL VALUE CHAINS.....	13
2.1. The phenomenon and its drivers.....	13
2.2. Opportunities for SMEs.....	15
2.3. Challenges for SMEs.....	21
3. PATTERNS OF GLOBALISATION IN FIVE INDUSTRIAL SECTORS	25
3.1. Globalisation issues in five industries	25
3.2. Different configurations of value chains	36
4. SMES AND GLOBAL VALUE CHAINS: CASE STUDIES FINDINGS.....	41
4.1. Awareness and understanding of global value chains	41
4.2. Co-operation in global value chains	46
4.3. Technology, innovation, standards and IPRs	53
4.4. Perceived benefits of SMEs' participation in global value chains	58
4.5. The role of government	61
5. CONCLUSIONS AND POLICY RECOMMENDATIONS.....	65
BIBLIOGRAPHY	68
ANNEX I. CASE STUDIES: COVERAGE, MAIN FINDINGS AND RESEARCH TEAMS	71
ANNEX II. ASSESSING THE PRODUCTIVITY OF LARGE, LISTED ENTERPRISES	80

Tables

Table 1.	Distribution of case studies by industry and country.....	12
Table 2.	Key attributes of the five industries analysed.....	39
Table 3.	SMEs' awareness and understanding of the value chain.....	43
Table 4.	Co-operation within the value chain.....	49
Table 5.	Technology, standards and IPRs within the value chain.....	56
Table 6.	Perceived benefits of SMEs' participation in global value chains.....	59
Table 7.	Policy issues from the field work.....	62

Figures

Figure 1.	Obstacles to Internationalisation as perceived by SMEs.....	15
Figure 2.	Changes in subcontracting structure, Japan.....	17
Figure 3.	SMEs in formal and non-formal co-operation.....	19
Figure 4.	National or foreign SMEs as important partners in cooperation.....	20
Figure 5.	Proportion of Japanese companies with overseas subsidiaries.....	20
Figure 6.	Software value chain (personal computer).....	30
Figure 7.	An example of value network for the tourism industry.....	33
Figure 8.	Value chain for motion pictures.....	35

Boxes

Box 1.	Value chain analysis: A tool for understanding competitiveness.....	10
Box 2.	Outsourcing and subcontracting.....	14
Box 3.	Subcontractors.....	17
Box 4.	Electronic marketplaces: the case of Covisint.....	18
Box 5.	Providing financing to small suppliers.....	22
Box 6.	Facing the challenge of global value chains: SMEs in developing.....	24
Box 7.	Analysing an enterprise's key attributes.....	42
Box 8.	How Egyptian suppliers are serving Microsoft globally.....	42
Box 9.	Co-operation between first and second tier suppliers of VolksWagen in Mexico.....	47
Box 10.	Boosting the competitiveness of the automotive parts industry in Chinese Taipei.....	47
Box 11.	SME alliances in the Austrian tourism sector.....	48
Box 12.	Funding innovative SMEs in the Polish tourism sector.....	55
Box 13.	Internet usage in the Australian tourism sector.....	55
Box 14.	Hovering on the edge of the value chain of Toyota South-Africa.....	58
Box 15.	Protecting IPRs in the cinema industry: the case of Nigeria.....	61
Box 16.	How are benefits from productivity growth distributed between firms?.....	83

ENHANCING THE ROLE OF SMEs IN GLOBAL VALUE CHAINS

EXECUTIVE SUMMARY

1. The globalisation of production has today 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.

2. 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.

3. 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

4. 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 opportunities 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 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 interviewed 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 also an important challenge for SMEs.

5. 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 precision and scientific instrument industries) or that it occupies a low position in the chain therefore there is limited knowledge beyond the surrounding environment (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 poor ability to upgrade, protect in-house technology, and to innovate.* SMEs stressed that they do not have the critical dimension necessary to support adequate R&D costs, training of personnel. Lack of working capital is also indicated as an obstacle, in particular when faced to delayed payments from international partners.
- *The fulfilment of strict product standards and quality required for participation in global value chains is difficult and costly.* SMEs complain about the proliferation of private standards set by contractors and the fact that they differ one from another, because this makes the costs of compliance 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 now recurrent practice

requesting complete transparency from sub-contractors on virtually every relevant aspect of their business has facilitated unfair behaviours, consisting in the contractor passing to lower-cost competitors original designs and plans submitted by SMEs 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 set 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 the issues at stake, revealed by many SMEs interviewed, plays against their possibility of responding in a timely and effective manner to the challenges of globalisation.*

Policy conclusions

6. 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 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 mirrors 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, interviewed SMEs did not acknowledge 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 from one or few customers.*

7. 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 for foreign customers. 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 inherent 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 ensuring confidence in SMEs' accounts receivables and facilitating SME financing can help small subcontractors overcoming 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 ***protection of intellectual property rights*** is a very relevant policy area. The insufficient 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 (MNEs). At present, these guidelines only evoke 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 conduit 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 are very important to influence investors' decision 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 specialization. By doing so, they strengthen their comparative 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 in developing countries the development of domestic industries and service networks*** 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 support an integrated approach to promoting trade and investment for development. 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 productive capacities development.

INTRODUCTION

8. While underway for decades, the globalisation process has recently taken an accelerated pace, as shown by the substantial growth of world imports and exports since the 1980s and, more recently, of 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, 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 aims to explore the benefits of SME participation in global value chains, the advantages this brings to SMEs, and to propose policy actions when appropriate.

9. This report is structured as follows: this section introduces the notion of value chain and value chain analysis and explains the methodology of the study; section 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 on SMEs; section 3 describes the main elements characterising the globalisation process in five industries selected for this study; section 4 presents the findings of the case studies carried out in the five considered 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.

1.1. The notion of value chain

10. The phenomenon of globalisation of production can be usefully analysed through the notion of 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.

11. 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 aiming at systematically reduce 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.

12. 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, the model of 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.²

13. *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 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 pictured by configurations others than a chain, i.e. as a network of activities and not a sequence.* In this meaning, the notion of value chain permits to analyse 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.

14. Also, the notion of 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, but small firms rarely act as the lead firms of the chain.

Box 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.

2. 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).

1.2. Methodology of the study

15. A sectoral approach was adopted to take into account that globalisation affects different sectors in different ways and that the role of SMEs across sectors varies. With the perspective of conducting field work, 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 relevant 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 “service-and-product” and the strategic role of large global players seems to increase.

Two services 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 size and strategic strengths have changed dramatically with the generalisation of digital and telecommunications technologies in the 1990s.

16. 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 involved Colombia, Egypt, India, Mexico, Nigeria and South Africa. Table 1 shows the distribution of case studies by country and industry, while the list of case studies is presented in Annex I.

Table 1. Breakdown of case studies by industry and country

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

17. A reasonable level of homogeneity of the case studies was ensured through the predisposition of a questionnaire used during the semi-structured interviews. In particular, the following core set of questions was covered by questions put to the interviewees: *the awareness and understanding of the global value chains and its participants; the co-operation with the global value chains and the sort of links; the relevance of technological skill, standards and intellectual property rights; and the role expected from the public government.* As an additional precaution, the analysis of the field work findings has taken into account the following aspects:

- *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 few hundred, although the average is around 20 enterprises. The criteria of selection of the purposive sample of enterprises, however, were always based on representativeness of the selected firms in the sector of reference.
- *Period of time:* The case studies were completed in different periods of time, between July 2005 and April 2007.

18. 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.³

³ Yin (1994) presents a thorough discussion of the issue of generalisation of case studies findings.

2. PRODUCTION IN GLOBAL VALUE CHAINS

19. 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).

2.1. The phenomenon and its drivers

20. 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 buyers-supplier relations in value chains are increasingly arranged through quasi-hierarchical relationships, which are replacing trade based on market-based transactions (Gereffi et al., 2005).

21. 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 product 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.

22. 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.

23. 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).

24. 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 consideration concerning taxation (Gage and Leshner, 2005) provide additional reasons for service offshoring.

25. 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”.⁴ 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. 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.

26. 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

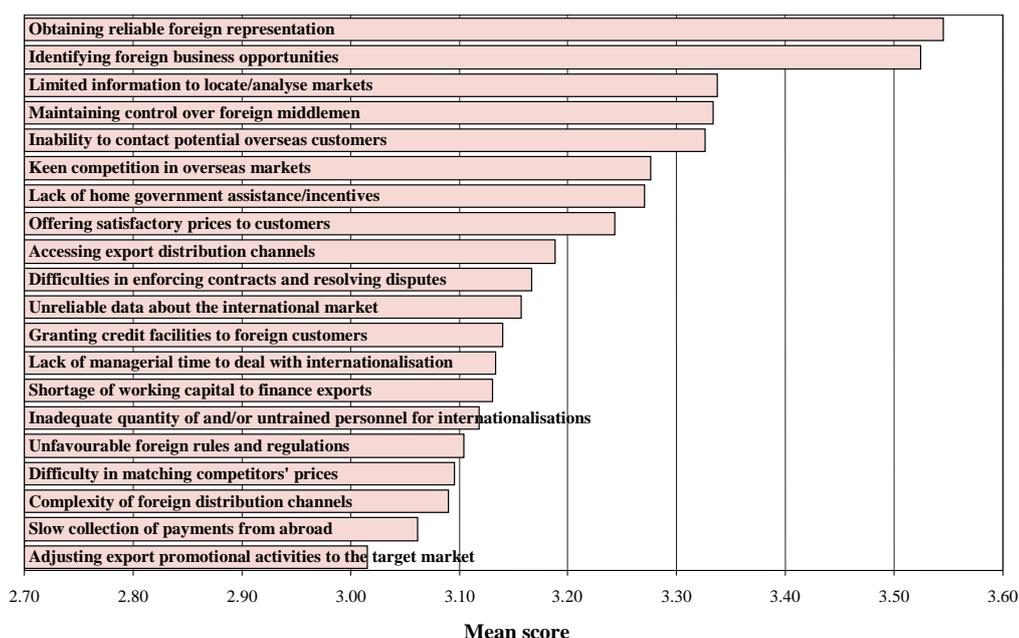
4. Ponte (2003) makes the example of roasters (the lead firms in the coffee value chain): the firms that are quoted in the stock exchange will be under pressure to externalise inventory management to reduce stockholding, while those privately-owned may find it profitable to hold stock. This may explain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

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).

2.2. Opportunities for SMEs

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

Figure 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, Removing Barriers to SME Access to International Markets, 2006.

28. 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 international 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 its segment with highest growth potential, to access a series of critical missing 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 the work production and trade suggests 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

29. 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).

30. 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 who focus on multipurpose technologies have secured their position in the market by becoming specialised suppliers serving different global value chains.

31. 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.

32. There are different profiles of subcontractors (Box 3), 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, with reference to Japanese firms.

Box 3. 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.

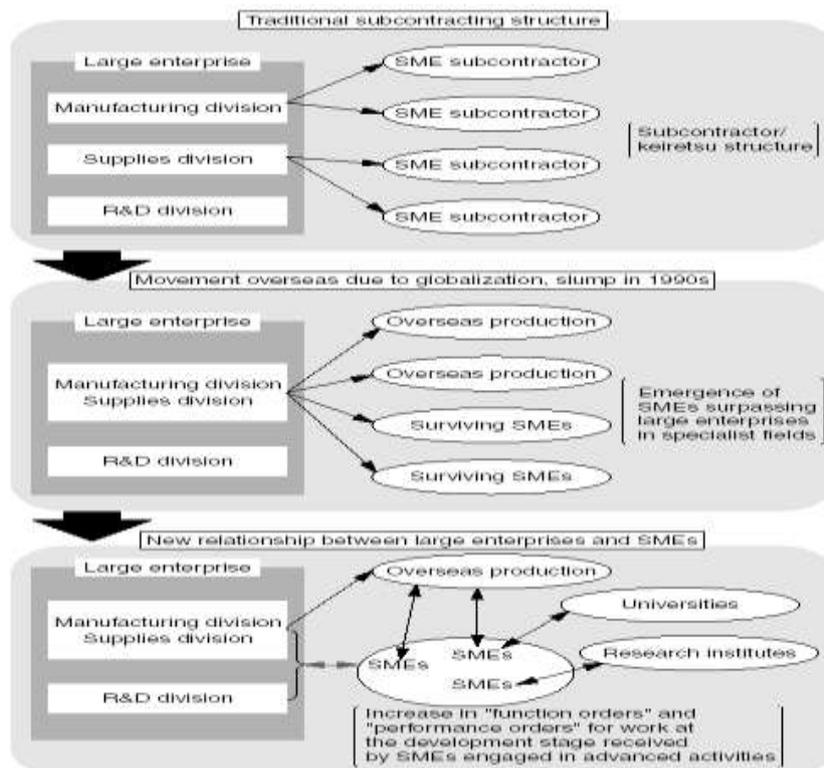
The first category concerns relatively commonplace goods and services with a low technological content (e.g. call centres, catering, intermediate inputs for various kinds of machinery, etc.). Because the base of suppliers in this category is wide, prime contractors can exert strong pressure on prices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

Figure 2. Changes in subcontracting structure, Japan



Source: Japan's 2005 White Paper of SMEs, SME Agency, Japan.

33. **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.

34. 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 auctions⁵ using their customers' e-marketplace, but they find it difficult to assess whether buyers' priority is a 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 4. Electronic marketplaces: the case of Covisint

In the automotive industry, the suppliers face increasing collaborative pressures to develop 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 founded by large OEMs such as GM, Ford and DaimlerChrysler and software companies such as Oracle.

The founders' aim 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 address costs and risks reduction pressures across the industry, it was 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.

35. Overall, SMEs are still reluctant towards 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)

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

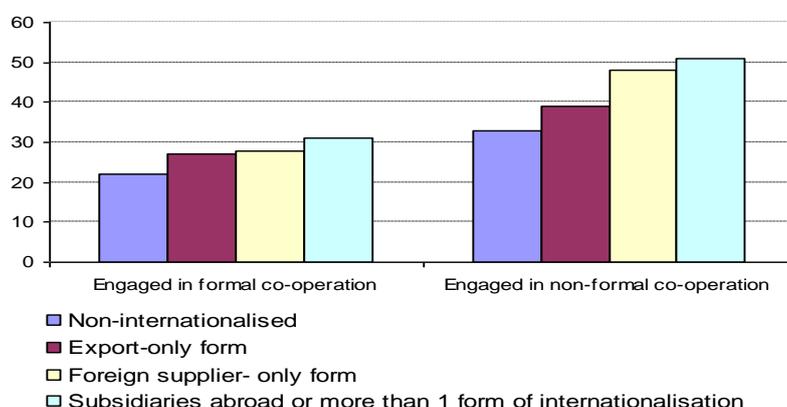
(European Commission, 2002; Kjølseth, 2005). Different standard requirements for products and services are another obstacle since this raises the entry cost to participate in different e-marketplaces, which can be already relatively high for small firms. Finally, many small firms are worried about unfair practices, such as price fixing, in online auctions.

Rationalising production: offshore outsourcing and acquisition of strategic assets

36. 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 rationalisation of production and optimisation of resources allocation. In many cases, it is the decision to follow abroad the contractor 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.

37. 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 access to cheap labour (e.g. via sub-suppliers) or access to 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 3 and 4).

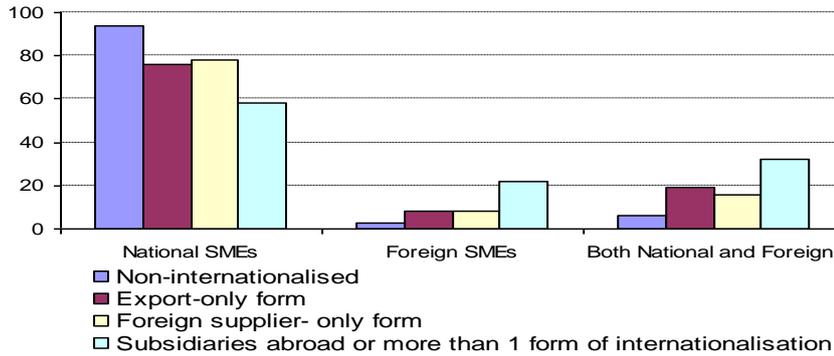
Figure 3. SMEs in formal and non-formal co-operation



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 4. National or foreign SMEs as important partners in co-operation

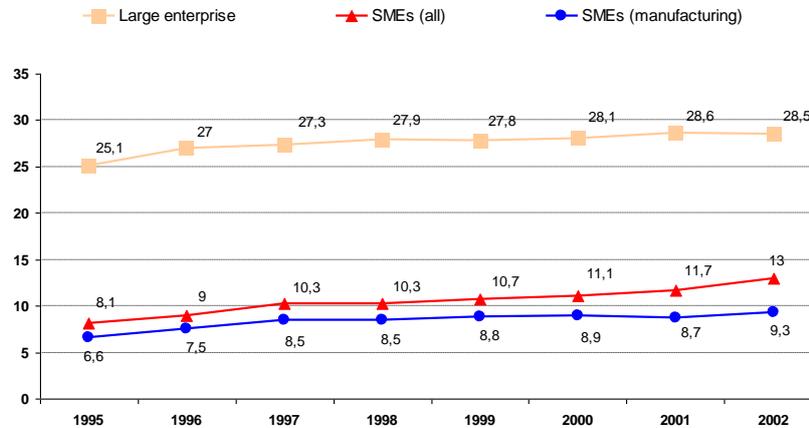


Note: See Figure 3.

Source: EC, ENRS Enterprise Survey 2003.

38. In Japan, the proportion of SMEs with overseas subsidiaries has increased constantly since the beginning of the 1990s, in particular in manufacturing (Figure 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 overseas 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 5. Proportion of Japanese companies with overseas subsidiaries



Source: Japan's 2004 White Paper on SMEs.

39. 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 relevant barrier to SMEs. Despite these problems, recent empirical evidence showed that SMEs can be successful in outsourcing abroad (Value Leadership Group, 2005). This depends on the fact that 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 eventually 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.

2.3. Challenges for SMEs

40. Overall, the globalisation of value chains constitutes a major challenge for small and medium-sized subcontractors used 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 administrative managerial practices set by international buyers.

41. Also, network relationships have gained large importance in global value chains 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.⁶ 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).

42. 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.

43. 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.

44. 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 cluster 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

6. 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.

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.

45. 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 oligopsonistic or monopsonistic market (e.g. Wal-Mart and its suppliers). While the decision to not 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.

46. **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 for instance “factoring” and “reverse factoring”⁷⁾ have been created to provide financing of working capital 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 5).

Box 5. 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 previews 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

47. **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 increasingly the effect of removing many developing countries SMEs from the supply chain. In producer driven GVCs, in particular in the vehicle, capital goods and electronics industry, this is at the origin 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

7. 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).

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.

48. 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 global sourcing partner. On the other hand, however, 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 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).

49. 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 6).

Box 6. Facing the challenge of global value chains: SMEs in developing

The establishment of sustainable linkages between SMEs and MNEs is one of the most efficient 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 linkages programmes shows that linkages building 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 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 facilitate 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.

Experience of the programme so far demonstrates that in spite of the productive capacities constraints of SMEs, MNEs were ready to upgrade the business relationships with SMEs into long-term relationships, provided SMEs committed themselves to remedy shortcomings in their business systems, and upgrade 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 up 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

3. PATTERNS OF GLOBALISATION IN FIVE INDUSTRIAL SECTORS⁸

50. This section 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 global value chain, 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.

3.1. Globalisation issues in five industries

Automotive Industry

51. According to a 2005 estimate by OICA (Organisation Internationale des Constructeurs Automobiles), the motor vehicle industry employed directly 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 provisions, meaning a minimum of 50 million additional employees earning their living from this industry.

52. Motor vehicle 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 the 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.

53. In 2004 the automotive production was close to 64 million vehicles per year (44 million passenger cars and 16 millions commercial vehicles, 3 million heavy vehicles and buses)⁹ whereas the production capacities for passenger cars only 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.

54. 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 of 91% for the same top 15 producers (OICA data). The majority of the top players in the automotive industry are global

8. This section was prepared by the Swiss Research Team led by Prof. Paul H. Dembinski. It draws on the industry reports prepared as background material for this study, namely: "A Preliminary Analysis of the Automotive and Medical & Scientific Equipment Industries" [CFE/SME(2006)1]; "Enhancing the Role of SMEs in Global Value Chains in the Software Industry: A Preliminary Analysis" [CFE/SME(2006)13]; and "Progress Report: Enhancing the Role of SMEs in the Global Tourism Industry" [CFE/TOU(2006)9].

9. Depending on the source, heavy vehicles and buses are either included or excluded from production and market statistics in unit terms.

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.

55. 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 of the critical size that would guarantee the economies of scale required to support sharp price competition and growing development costs. In the automotive industry, 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-part 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.

56. ***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 facilities¹⁰. 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.

57. While increasing the share of external suppliers in the final added value, 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.

58. ***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.

59. ***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 assembly line level but also at repair-shop level. This attempt at "liability sharing" extends the financial pressure on automotive parts and sub-system supplies.

10. Ford sold Visteon in 2000, and GM did the same with Delphi in 1999.

Scientific and Precision Instruments Industry

60. ***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. SPI products comprise sets of functionalities being at the core of the manufacturing activity through technologies such as nanomaterials and mechatronics. 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 addressed product use technologies that are applied throughout a range of other products, but not necessarily exclusively scientific and precision instruments products.

61. Most of the SPI products require a high level of innovation in product development, a high level of customisation (and become rapid obsolete) and highly skilled labour in close proximity to industry’s research and development labs. SPI products such as the 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 high number of start ups and the existence of many small specialised companies in the sector.

62. The SPI industries typically comprise a few large and highly diversified multinational enterprises and a significant number of SMEs. In the US, as well as in Europe, very large companies dominate the retail and B2B wholesale markets of medical devices. A relatively higher market concentration for medical devices can be explained by regulatory obstacles, which are tantamount to entry barriers and may reduce competition. Dominant companies invest heavily in R&D but also 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).

63. 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.

64. ***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 they prevent the exploitation of economies of scale. Promoting industry standards and international co-operation in product and production regulations should facilitate economies of scales and encourage exports.

Software industry

65. The software industry is very complex, with many complementary products necessary to form a systems solution. Together, the software suppliers, standardisation bodies, services 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.

66. 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, meeting windows of opportunity, 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.

67. 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 favoured by low entry costs.

68. Globalisation has much stronger effects on IT than on many more traditional sectors. Many IT products, such as software, have 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.

69. 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 prepackaged. 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 (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.

70. ***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 fiber, 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.

71. 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 known internet search and motor engine, have been multiplied by a factor of 30 since its creation 11 years ago, to register at US\$ 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).

72. 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 US\$ 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 gaming segment of the software industry is evidenced by the fact that three major players of this industry – Nintendo, Electronic Arts and Konami - are active in videogames.

73. ***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.

74. 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.¹¹ 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”.

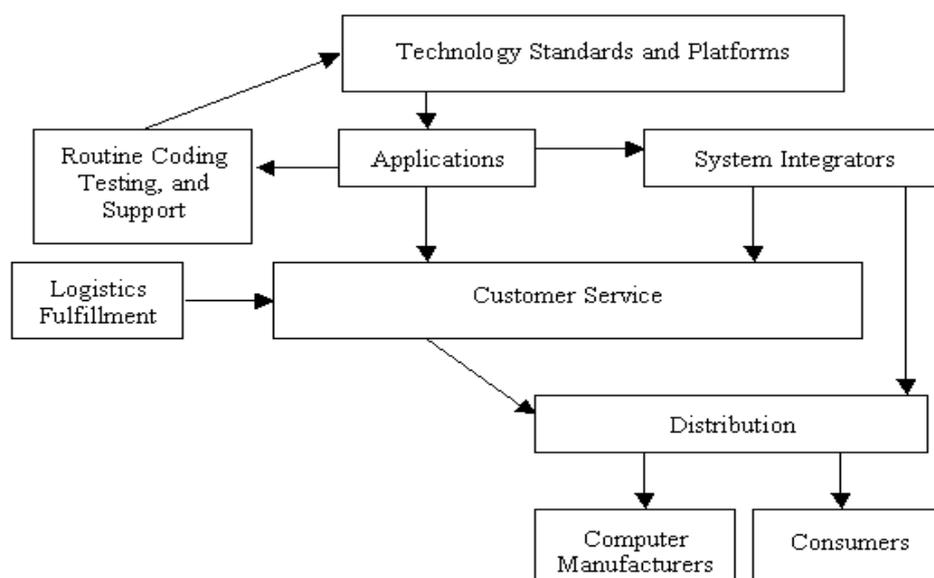
75. ***Software value chain.*** In the software industry, the value chain is driven by technology standards and platforms upon which other products are produced. Control over technical standards is a critical factor in the chain, in order to secure, through standardised products, a major part of the 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.

76. 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 application 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

11. 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.

software tools, when developing software for existing or potential clients. These choices are risky in the long term as changes may occur in the market standards.

Figure 6. Software value chain (personal computer)



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

77. **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 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 intellectual property protection, as evidenced by the controversy on software patents.

78. The protection of intellectual property rights, trade secrets and ownership confers the right to control the dissemination and use of information and software, which is an essential underpinning of the commercial relationship between software producers, distributors and the end-user. In most cases, access to the use of particular software can be gained (legally) by paying 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 service over the network (by subscription or usage pricing).

79. 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 also maintain high prices and licensing fees. Encouraging investment and innovations, at the firm level, can be obtained 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 the state of the art innovations are difficult to capture and describe with accuracy.

*Tourism industries*¹²

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

81. 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 characteristic activities (activities which the principal output is characteristic of tourism) include accommodation, restaurants, passenger transport services, travel agencies and tour operators, cultural and sporting services.¹³ 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.

82. 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 are representing 84% of the 25 leading countries in the world in the travel and tourism competitiveness index.¹⁴ At the level of enterprises, the appropriate data is lacking to precisely assess their competitiveness. The study on the tourism industries 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.

83. ***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.

84. ***Hotels Groups.*** Between 1995 and 2005, the six leading brands have remained in the same ranking order for ten years. A study made by MKG Consulting shows that the growth rate (supply

¹². 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].

¹³. Tourism Satellite Account: Recommended Methodological Framework, UN, UNWTO, OECD and Eurostat, 2001.

¹⁴ World Economic Forum, The Travel & Tourism Competitiveness Report 2007, March 2007.

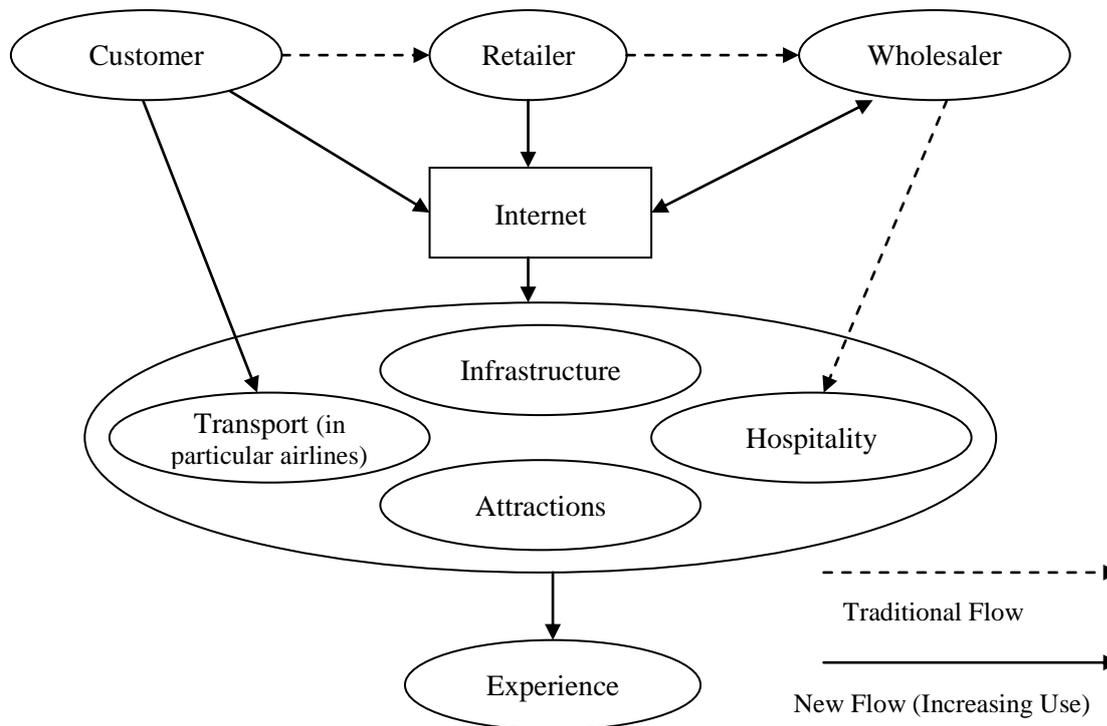
expressed in number of rooms) of the ten group leaders between 1995 and 2000 has been on average 85%. For the most part they have developed organically. Half of these chains are leaders on the economy segment and have a preference for franchise management. Strong growth in supply is mandatory for holding 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.

85. *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 economically most significant sector, and the charter flight market. The vertical integration of tour operators aims to increase the size of the tour operator and its revenues by lowering, for example, the distribution costs, to support products' differentiation and to improve operating efficiency.

86. *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 for customer satisfaction and individual treatment.

87. 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 product 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 product 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 destination.

Figure 7. An example of value network for the tourism industry



Source: Tourism industry case study, Australia, 2005.

88. **Networks and clusters are key elements of success for SMEs in tourism.** The study on the tourism industries highlighted the key role played by other forms of inter-firms relationships. The consumer is looking for a comprehensive tourism experience which includes all the products and services (transport, accommodation, catering, entertainments, 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 a clustering incentive. Many regions, however, lack the critical mass of firms as well as the critical elements of strategic infrastructure (hard, financial and human infrastructure) needed for cluster development and growth.

89. 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 the small size by undertaking cooperative 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, which is underpinned by SME networking and knowledge sharing.

90. ***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 continual improvement to satisfy customer expectations. There is a high potential of 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 give SMEs with their small size and flexibility an important role to play for customer satisfaction and individual treatment.

91. 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 new product and process standards requirements. Many SMEs in the hotel or travel agency sectors are dependent of global/regional players and are in fierce competition with other SMEs; this situation is creating a strong battle on prices and is reducing the profitability of SMEs. As discussed in section 4, many SMEs in tourism do not understand how they can benefit from an increased participation in GVCs and therefore do not co-operate with large players.

92. 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 international value chains.

Cinema Industry

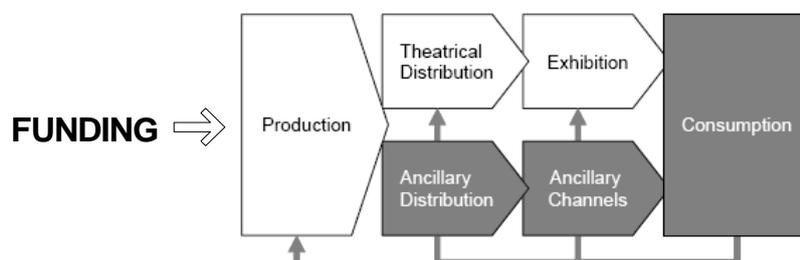
93. In the cinema industry, the major studios simultaneously engage in four distinct business functions: financing, producing, distributing, marketing and advertising of their film and television properties. To carry out these functions they depend greatly on many smaller entrepreneurial firms. The dominant position of major Hollywood's 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.

94. 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).

95. ***The financial architecture: the key issue.*** Both hedge and private equity funds are capable of providing upwards of 500 million to 1 billion of US\$ in return for rights to either what are known as "first-cycle" revenues of already released films (i.e., revenue advance securitisations) or the earlier types of future securitisations of production costs for film portfolios 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 and prints and advertising for the average major (Motion Picture Association of America, MPAA) 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 even ten or fifteen years ago.

Figure 8. Value chain for motion pictures



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

96. 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.

97. Funding is a perennial issue for companies both big and small given that the long-run uptrend in costs of production and marketing show no signs of mitigating. This is not related as much to the cost of technological implementation, which tends to become less expensive over time, but because of top-line talents – be they feature film directors, actors, musician-composers, or game and special-effects designers – 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.

98. **Highly concentrated production and distribution.** According to 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.

99. Major studios may i) develop and support in-house around 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 than usual 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.

100. **The importance of advertisement investment.** It is important to recognise that it is to the theatrical box office performance that all subsequent fees in the markets down the line are arithmetically tied, with the distributor “rentals” derived from the US box office no longer account for more than 15% of the total revenues – DVDs, cable and satellite and television market licensing generate the remaining 85%. Although the theatrical “window” 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 100 million US\$ for production may on average require an additional 50 million US\$ of advertising and promotional efforts.

101. 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.

102. 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.

103. ***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, who often but not always are small enterprises.

3.2. Different configurations of value chains

104. 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 topical research question concerning the role of SMEs (Table 2).

105. ***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 is the case of software products;
- Price range: from tenths of US\$ for movie products to millions in 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.

106. ***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 value adding is made of efforts to reach the final customer or user. 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.

107. 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.

108. 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.

109. An additional important aspect of the global value chain 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.

110. Evidence suggests that in the automobile global value chain, 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%.

111. ***Alternative and competing global value chain structures.*** The question is to know whether the dominant structure of global value chain is a unique one (as in automobiles), a dominant one (like in cinema), one of few (like in tourism), 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 question of contestability and innovation in the global value chain structure is closely related to the one about the strategic portion of the global value chain: what are the value adding activities that have a structuring impact on the next steps of transformation.

112. ***Role of SMEs in production and distribution segments.*** The place and role that SMEs actually play or could play in global value chains depends on the role and strength of focal firms and the prevalence of the global value chain 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.

113. ***Methods of trans-enterprise co-ordination or governance.*** Most of the global value chains 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 sharp 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.

114. The most commonly known typology of “global value chains” governance is the one developed by Gereffi (1994), which differentiates between buyer and producer driven value chains: “Producer-driven value chains are those in which large, usually transnational, manufacturers play the central roles in coordinating production networks (including their backward and forward linkages). This is characteristic of capital- and technology-intensive industries such as automobiles, aircraft, computers, semiconductors and heavy machinery. Buyer-driven 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 handicraft” (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 consequence, in either of these configurations, SMEs cannot do more than be a second or even third-tier supplier. 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 global value chains, extending from high to low level of “explicit co-ordination” and “power asymmetry”: hierarchy, captive, relational, modular, and market.¹⁵ 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.

115. *Are roles evolving?* Global value chains 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.

116. In most well established global value chain 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 financial liquidity necessary to quickly acquire “interesting” SMEs.

117. Symmetrically, SMEs have control of the basic knowledge of individual processes and local clients and they are quick at exploring 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 II).

¹⁵ See footnote 6.

Table 2. 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, are deeply affecting traditional distribution channels.
Key deliverable	Fairly homogenous but highly "branded" durable products; long product life-cycles; average price 10-20 000 US\$	Extremely heterogeneous product lines often coupled with expert services or disposables; rather short, technology driven, life-cycles; price brackets: from few US\$ 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 1000 US\$, 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 US\$	Aesthetic performance/experience in a theatre or in private environment (home); very short life-cycle. Price brackets: 10-50 US\$
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

	Automotive Industry	Scientific and precision instruments	Software	Tourism	Cinema
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)
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

4. SMEs AND GLOBAL VALUE CHAINS: CASE STUDIES FINDINGS

118. This section 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 of the understanding of the value chains and their structure; the co-operation with and dependence from 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 public government in facilitating and supporting their participation in global value chains. As explained in section 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 this analysis constituted the background context for the interpretation of the case studies findings.

4.1. Awareness and understanding of global value chains

119. Awareness of the business environment and its evolution, and 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 findings highlighted the following:

- 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 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 precision and scientific instrument industries) or that it occupies a low position in the chain therefore there is limited knowledge beyond the surrounding environment (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 global value chains. 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 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 insufficient ability to define the adequate business model to gain or reinforce a firm’s competitive advantage. Box 7 presents an example of simplified analysis of a firm’s strengths in its market of reference.

- *Specialised and niche market SMEs are more 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 (Box 8). However, customisation of production is perceived as risky when it creates dependence on just one buyer.

120. Table 3 summarises the answers from the interviewed SMEs on the topic of awareness and understanding of global value chains.

Box 7. 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 sort of result this exercise would provide is exemplified in the table below, which shows the identification of the key strategic attributes for distinct segments in the tourism sector in the Balearic Islands (Spain).

Most important business attributes	
In the accommodation sector:	In the travel agencies sector:
<ul style="list-style-type: none"> - service by the personnel - location and facilities - quality and excellence in the service - brand and know-how - customer satisfaction and individual treatment 	<ul style="list-style-type: none"> - personalised service - after-sale service - quality
In the transport sector:	In the leisure and catering sector:
<ul style="list-style-type: none"> - security - quality 	<ul style="list-style-type: none"> - the human team

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

Box 8. How Egyptian suppliers are serving Microsoft globally

The case study on 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 3. SMEs' awareness and understanding of the value chain

<i>Case study</i> <i>Question</i>	<i>The structure of the value chain(s) of their sector, their market/ price structure/ competitors</i>	<i>Their key assets or weaknesses in the chain</i>
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 are related to strong human resources and technology.
Spain	SMEs have a profound knowledge of the auto value chain and of the main players.	SMEs consider their flexibility, adaptability, and ability to produce short series as their strengths, but recognise that firms of large size have greater financial capacity and a stronger technology base.
Turkey	The firms interviewed have a good understanding of the value chain. 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' identity as the original supplier of branded products has allowed to enter 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 value chain structure and are aware of the prevailing conditions in the market(s) they serve.	1 st tier suppliers have become too specialised, producing only one product; 2 nd 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 componentry 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.

Case study Question	The structure of the value chain(s) of their sector, their market/ price structure/ competitors	Their key assets or weaknesses in the chain
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 value chain. 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 value chain.	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.
Germany/Jordan	Jordanian SMEs recognise German tour operators – the producers of the package tours - as the main agents of the value chain.	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 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 value chain. They consider travel agents and tour operators, as well as large international or domestic hotel chains, as the key players of the value chain.	SMEs identify as key factors of competitiveness cost levels, service quality and coverage. Competition at the local, regional and international level pushes towards costs reduction and training of personnel.
Spain (Andalusia)	The SME hotels recognise the large tour operators as the main agents of the value chain. Travel agencies acknowledge their role of intermediation and identify the large vertical groups and transport companies as the main agents of the value chains.	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 value chain, which they believe should always be focused on the customer.	The key assets are identified in brand, customer satisfaction, quality/ price ratio. Product diversification is seen as an important strategy to reduce dependence on a specific market and also to deseasonalise.

Case study Question	The structure of the value chain(s) of their sector, their market/ price structure/ competitors	Their key assets or weaknesses in the chain
Switzerland	Travel agencies and tour operators have a better knowledge and understanding of the value chain in the sector than SME hotels.	For SME, personalised service and advice to their customers is a key asset.
Cinema		
Korea	The value chain 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 themselves, SMEs plan to collaborate with other firms in various activities. In particular, they would like to co-operate for global distributions.	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 the contents need to be more adjusted to the global preference.
United States	The value chain is extremely complex, with complementary roles for large and small firms. The major studios depend greatly on many smaller entrepreneurial firms to carry out their missions. 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 value chains, but are clearly aware of the immediate supplier-producer relationship. The two national TV channels have their own in-house production for 3D-animation to be used for TV shows/serials identity packages and promotion, and TV channel branding. When in-house capacity is insufficient to supply demand 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 value chain stretching from Hollywood to a flourishing in 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 Africa 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 - 2007.

4.2. Co-operation in global value chains

121. 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 to 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.

122. 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 dimension 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 inefficient information flow, as they mostly rely on information transmitted from other suppliers working at levels between them and the contractor*. Some complain for 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 9).

- *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 10). In recent years, a stream of research on business clusters has focused on the links between cluster analysis and value chain approach with a view to identify policies to improve international competitiveness of enterprises in clusters (Pietrobelli and Sverrisson, 2004; UNIDO, 2004a).¹⁶ The argument is that also 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 global value chains improves upgrading capacity and market access. Recent research indicates, indeed, that clustered firms have increased their extra-regional sales and purchases (Altemburg, 2006).

- A variety of co-operation models exist in the tourism sector, where many small hotels have remained independent. SME hotels appear confident of the benefits of setting up alliances in case of

16. 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.

horizontal co-operation (as in the example described in Box 11), while the advantages of affiliation to large groups are not always clear to them. However, SMEs recognise that belonging to chains for commercialising provides them with more bargaining power when negotiating with other actors in the tourism industry and in related chains.

123. Table 4 below summarises the answers from the interviewed SMEs on the topic of co-operation between SMEs and other partners in global value chains.

Box 9. 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 problematic to fill out 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 10. 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, 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 sufficient 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 information technologies infrastructures in Chinese Taipei are considered as two key assets to respond to the customization of demand. 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.

Box 11. 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.

Table 4. Co-operation within the value chain

<i>Case study</i> <i>Question</i>	<i>Level of co-operation with contractor(s), suppliers and/or partners</i>	<i>Level of dependence of SMEs from main contractor(s)</i>
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 2 nd 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.

Case study	Level of co-operation with contractor(s), suppliers and/or partners	Level of dependence of SMEs from main contractor(s)
Question		
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.
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

Case study	Level of co-operation with contractor(s), suppliers and/or partners	Level of dependence of SMEs from main contractor(s)
Question		
		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 commercialising 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.
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	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.

Case study	Level of co-operation with contractor(s), suppliers and/or partners	Level of dependence of SMEs from main contractor(s)
Question		
	same sector, such as production or distribution, which is called as parallel co-operation systems.	
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.

4.3. Technology, innovation, standards and IPRs

124. 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 learning. 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.

125. 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).

- Some SMEs indicate that *the capacity to finance innovation* is a requirement to participate in the global value chains, which they find difficult (Box 12).

- In the automotive industry, the issue of R&D capacity was raised by several interviewed 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, proofed for energy efficiency, noise, etc. The assembly methods based on modularity allows a contractor to transfer the cost of development on 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 13).

- *SMEs consider relevant to better manage their intellectual assets, including through protection of intellectual property rights when appropriate*. Interviews with key players in the automotive and precision instruments industries confirmed cases reported in recent empirical literature, namely that today 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 denying 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 do not necessarily provide a basis to obtain a premium in prices. Niche players seem better equipped to face these problems, because their higher level of technological knowledge (as in the precision and scientific instruments industry).*

Product and process standards

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

127. There are many benefits for a firm in the adoption of 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 actual patterns of standard enforcement in firms occupying lower tiers in the chain. First, there is a question of volume of standards. There is an increasing pressure on standard adoption in industry in order to respond to requirements in matter of security and protection of health and environment coming from public 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.).

128. 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.

129. 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.

130. Finally, standardisation may bring a type of homogenisation of offers that has both benefits and risks for SMEs. One example is the practice of 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.

131. Table 5 summarises the answers from the interviewed SMEs on the topics of technology, standards, and IPRs.

Box 12. 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 to introduce the necessary innovation that would permit to ensure, strengthen or upgrade their position in the chain. The ability to innovate is considered critical to better participate in tourism value chains.

Box 13. 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 in cost. This enables SMEs to market their service worldwide with out 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, as 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 to which English websites are not easy to use (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.

Table 5. Technology, standards and IPRs within the value chain

<i>Case study</i> <i>Question</i>	<i>Technology/ Intellectual Property (IP)/ Ability to cope with required standards</i>
Automotive	
Australia	Technological capabilities were recognised as 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 mainly 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 a stable pace in 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 license 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 license. 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 on 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 a premium in 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 newly passed 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.

<i>Case study</i>	<i>Technology/ Intellectual Property (IP)/ Ability to cope with required standards</i>
<i>Question</i>	
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.
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, what means 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 is intended in the form of expanding and improving 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 dysfunctional and this has created myriad 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 expansion 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 excellent talents in terms of 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 opened recently 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.

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

132. 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 conducted for the case studies, SMEs were asked about their perception or experience of participation in global value chains. The main findings can be summarised as follows:

- Overall, the answers by the SMEs interviewed 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 to participation to global value chains (Box 14).
- One key factor of successful integration is co-operation with the network: co-ordination of work with partners upstream and downstream the chain increases the chances of success, due to substantial benefits in terms of information flow, access to superior technology and learning opportunities.

133. Table 6 summarises the answers from the interviewed SMEs as regards their perception of the benefits of participating in global value chains.

Box 14. 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 global value chain 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 global value chain and its dynamics in order to understand customer's needs. All the interviewed suppliers indicated that, should they wish to expand the scope of their production to export to other Toyota plants, they have no choice but to seek international partners and work within the GVC framework.

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

Table 6. Perceived benefits of SMEs' participation in global value chains

<i>Case study</i>	<i>Question</i>	<i>Benefits of being part of a supply/value chain</i>
Automotive		
Australia		Many of the SMEs consulted 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 floating but it is entirely up to SMEs to capture them for their own advantage. Entering GVCs on a sustained basis, they feel, is only possible via latest technology route and proper supply-chain management system.
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 global demand expansion. 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 PIs 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.
Egypt- Microsoft		The Microsoft partnership has been instrumental in enabling local companies address 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

Case study	Benefits of being part of a supply/value chain
Question	markets. Microsoft benefits from this expansion in serving its customers in other Arab markets where resources are less available 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 bring in standard of execution.

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

4.5. The role of government

134. 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 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 mirrors 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, interviewed SMEs did not acknowledge 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* (for instance, Box 15 illustrate 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 from one or few customers.*

135. Table 7 summarises the policy issues which emerged from the field work.

Box 15. 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 authorization. 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 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 embarked upon, 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 right-owners receive a due compensation for the use of their works.

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

Table 7. Policy issues: Insights from the field work

<i>Case study</i> <i>Question</i>	<i>Policy issues</i>
Automotive	
Australia	<p>SMEs are concerned with increasing their innovation and R&D, flexibility and ability for just-in-time delivery, and marketing.</p> <p>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.</p> <p>SMEs face difficulties due to a lack of IP enforcement in low-cost manufacturing countries and a lack of skilled and willing workers.</p>
Chinese Taipei	<p>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.</p> <p>SMEs seek assistance in acquiring certification from giant international automakers.</p>
Japan	<p>SMEs need easier access to an information infrastructure, namely for the collection of accurate information about the global business environment.</p> <p>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 global value chains 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).</p>
Spain	<p>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 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.</p>
Turkey	<p>SMEs are concerned with increasing their investments, research and development and innovation efforts. They consider increasing production costs as a significant threat for them.</p>
India- Tata Motors	<p>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.</p> <p>SMEs need access to the latest technical information and venture-type financial support for R&D and new product development.</p>
Mexico- VolksWagen	<p>Local SME suppliers need greater support to undertake the learning process which allows them to meet global quality standards.</p> <p>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.</p>
South Africa- Toyota	<p>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.</p> <p>SMEs draw attention to their need for increased skills development, investment, and technology development, as well as an increase in safety and security and</p>

<i>Case study</i>	<i>Policy issues</i>
<i>Question</i>	
	improved infrastructure.
Scientific and Precision Industry	
Australia	<p>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.</p> <p>SME would like to see an increase in capital access for investments, research and development, and marketing as well as a harmonisation of requirements for technical standards and regulation compliance.</p>
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 market and financing R&D, capacity to stand competition with giant firms, and piracy.
Egypt - Microsoft	<p>To expand their market and growth 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.</p> <p>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.</p>
Tourism	
Austria	When clear market failures occur, it might be worthwhile for national/local public authorities to accompany SMEs in planning their cooperation strategies with a view to optimise the service chain both on supply and on demand sides or to upgrade the cooperation 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 equipments; improve the levels 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 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 continual improvement and innovation to face the fierce competition with international offer and compete with enterprises that have very different costs structure and that are able to set lower prices for products.

Case study	
Question	Policy issues
	The request in terms of public aid focuses on the promotion and improvement of the tourism environment and the infrastructures, 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 difficulty 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 major firms since that could undermine the balance of development and growth essential for global competitiveness. The IT cluster should play an important role; for example it could be used as a testing field for new value-adding businesses.
United States	In order to remain independent, SMEs should continue developing new innovative technology. For this they need access to expansion capital and improve marketing and distribution expertise. Funding may become a real problem due to long-run uptrend in costs of production and rising costs of capital.
Colombia - 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 for foreigners working in Colombian that hinders 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 infrastructures which has led to high costs of doing business. Promotion of FDI, local investments and tax breaks would improve these financing difficulties. SMEs would like to see greater efforts to improve the regulatory environment ex: IP infringements and piracy; in addition to enforcement as prosecution is to date slow and cumbersome.

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

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

136. Although it is difficult to establish common trends in the diversified universe of SMEs, the case studies conducted in several OECD members and non-members 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 accomplished 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 in global value chains experience. Indeed, co-operation with the network appears a key factor. Case studies in the automotive and tourism sectors indicated that co-ordination of work 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 global value chains 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 on improvement of staff skills.

137. The increased opportunities for SMEs come along with serious challenges in terms of managerial and financial resources, and ability to upgrade and protect in-house technology and to innovate. When questioned on these issues, SMEs point to their lack of critical dimension necessary to support adequate R&D costs, training of personnel, and fulfilment of strict requirements of product standards and quality. Insufficient working capital is also indicated as a barrier to the participation in global value chains, in particular to face delayed payments from international partners. 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, but also 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 awareness on the complexity of the issues at stake, which unfortunately many SMEs surveyed revealed, plays against their possibility of responding timely and effectively to the challenges of globalisation.

138. 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 for foreign customers. 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 inherent 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 ensuring confidence in SMEs' accounts receivables and facilitating SME financing can help small subcontractors overcoming 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.
- **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 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 evoke 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 conduit 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 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 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 are very important to influence investors' decision on linkages development.

- ***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 cooperating in complementary areas of specialization. By doing so, they strengthen their comparative 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 in developing countries the development of domestic industries and service networks*** 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 support an integrated approach to promoting trade and investment for development. 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 productive capacities development.

BIBLIOGRAPHY

- Altenburg, T. (2006), "Donor approaches to supporting pro-poor value chains", report prepared for the Donor Committee for Enterprise Development, German Development Institute, April.
- Brainard, L. and R.E. Litan (2004) "Offshoring Service Jobs: Bane or Boon --- and What to Do?", Policy Brief 132, The Brookings Institution, Washington.
- Centre for Medicare & Medicaid Services (CSM) (2002), Medical Supplies and Device, October.
- Christensen P. R. (1999), Challenges and pathways for small subcontractors in an era of world wide restructuring of supply chains, Centre for Small Business Studies, The University of Southern Denmark, Working Paper No. 1999/4
- Copenhagen Centre (2004), SMEs and ethical supplier standards: Workshop hosted by The Copenhagen Centre with Erhvervsbladet and Kolding Erhvervsråd, 23 November.
- European Commission (2004), European Competitiveness Report 2004, Bruxelles, European Communities, chapter 4.
- European Commission (2003), Observatory of European SMEs, No. 4. Internationalisation of SMEs, Brussels.
- European Commission (2002), On B2B Internet trading platforms: Opportunities and barriers for SMEs – A first assessment, Commission Staff Working Paper, SEC(2002)1217, Brussels.
- Gage J. and M. Leshner (2005), Intertwined: FDI in Manufacturing and Trade in Services, OECD Trade Policy Working Paper No. 25.
- Gereffi, G., J. Humphrey and T. J. Sturgeon (2005), "The governance of global value chains", Review of International Political Economy, 12:1 February, 78-104.
- Gereffi, G. and T. J. Sturgeon (2004) Globalisation, Employment, and Economic Development: A Briefing Paper (Industrial Performance Centre, MIT) Sloan Workshop Series in Industry Studies Rockport, Massachusetts, June 14-16.
- Gerst M., Bunduchi R. and R. Williams (2005), "Social shaping and standardization: a case study from auto industry", in Proceedings of the 38th Hawaii International Conference on System Sciences.
- Harland C. and R. C. Lamming (2001), A Taxonomy of Supply Network, The Journal of Supply Chain Management, Fall.
- Hatzichronoglou T. (2007), "Offshoring and Employment: Trends and Policy Implications", DSTI/EAS/IND/SWP(2005)2/REV2, OECD, Paris.
- Humphrey J. and H. Schmitz (2004), Governance in Global Value Chains, in H. Schmitz (ed.) Local Enterprises in the Global Economy, Cheltenham: Elgar.

- Japan Small Business Research Institute (JSBRI) (2004) (2005), White Paper on Small and Medium Enterprises in Japan.
- Industry Canada (2006) Logistics and Supply Chain Management (SCM). Key Performance Indicators (KPI) Analysis. A Canada/United States Manufacturing Perspective, November.
- Kaplinsky, R. and J. Readmen (2001), Integrating SMEs in Global Value Chains. Towards Partnership for Development, Report prepared for UNIDO, Vienna.
- Kappler L. (2004), The Role of “Reverse Factoring” in Supplier Financing of Small and Medium Sized Enterprises, Development Research Group, World Bank.
- Kjøseth B. B. (2005), The Evolution of E-Marketplaces: Are They Useful to Small Companies?, eMarket Services, www.emarketservices.com.
- Messerschmitt D. G. and C. Szyperski, (2003), Software Ecosystem. Understanding an Indispensable Technology and Industry, The MIT Press, Cambridge Mass.
- OECD (2007), “Draft Synthesis Report on Global Value Chains”, DSTI/IND(2007)5.
- OECD (2006), Removing Barriers to SME Access to International Markets, OECD, Paris.
- OECD (2006b), Digital Broadband Content: Film and Video, DSTI/ICCP/IE(2006)11.
- OECD (2005a), SME and Entrepreneurship Outlook 2005. OECD, Paris.
- OECD (2005b), “MNE-Local Enterprise Development: Encouraging Linkages between Small and Medium-Sized Companies and Multinational Enterprises”, DAF/INV/WD(2005)12/REV1.
- OECD (2005c), Handbook of Economic Globalisation Indicators. OECD, Paris.
- OECD (2000), SME and Entrepreneurship Outlook 2000, OECD, Paris.
- OECD (1997), Globalisation and Small and Medium Enterprises (SMEs), Paris.
- Paraskevas A. (2005), “The Impact of Technological Innovation in Managing Global Value Chains in the Tourism Industry”, OECD-Korea Conference on Global Tourism Growth: A Challenge for SMEs”, Gwangju, 6-7 September.
- Pietrobelli C. and Sverrisson A. (2004) (eds.), Linking Local and Global Economies: The Ties that Bind. London and New-York: Routledge.
- Porter, M. (1985) Competitive Advantage: Creating and Sustaining Superior Performance, Free Press, New York.
- Ponte, S. (2003) “Quality Conventions and the Governance of Global Value Chains”.
- Rabellotti, R. (2004), “The effect of globalisation on industrial districts in Italy: The case of Brenta”, in H. Schmitz (ed.) Local Enterprises in the Global Economy: Cheltenham: Elgar.
- Sakai, K. (2004) Global Industrial Restructuring: Implications for Small Firms, OECD STI Working Paper, 2002/4.
- Stabell, C. B. and Ø. D. Fjeldstad (1998) “Configuring Value for Competitive Advantage: On Chains, Shops, and Networks”, Strategic Management Journal.

- Sturgeon, J. T. (2001) “How Do We Define Value Chains and Production Networks”, *IDS Bulletin*, Vol. 32, No. 3.
- UNCTAD (2006), “Global Value Chains for Building National Productive Capacities”, *TD/B/COM.3/79*.
- UNCTAD (2005a), “Internationalisation of Developing-Countries Enterprise through Outward Foreign Direct Investment”, Issue note prepared for the Expert Meeting on Enhancing Productive Capacity of Developing Country Firms through Internationalisation, Trade and Development Board, Commission on Enterprise, Business Facilitation and Development, Geneva 5-7 December 2005.
- UNCTAD (2005b), Improving the Competitiveness of SMEs through Enhancing Productive Capacity, *UNCTAD/ITE/TEB/2005/1*
- UNCTAD (2005c), Linkages, Value Chains and Outward Investment: Internationalization Patterns of Developing Countries' SMEs, *TD/B/COM.3/69*
- UNIDO (2004a), “Inserting Local Industries into Global Value Chains and Global Production Networks: Opportunities and Challenges for Upgrading”, Vienna.
- UNCTAD (2004b), “Promoting the Export Competitiveness of SMEs”, *TD/B/COM.3/EM.23/2*.
- Usine Nouvelle (2006), Dossier Spécial Sous-traitance, novembre 2-8.
- Value Leadership Group (2005), “How European IT SMEs are leveraging offshore capabilities to reignite growth, improve financial performance, and capture new markets”, Frankfurt am Main.
- Van Welsum, D. and G. Vickery (2004), “Potential Offshoring of ICT-Intensive Using Occupations”, *DSTI/ICCP/IE/(2004)19/FINAL*, OECD, Paris.
- Veloso F. and R. Kumar (2003), “The Automotive Supply Chain: Global Trends and Asian Perspectives”, *International Journal of Business and Society*, July.
- Yin, R. (1994), *Case study research: Design and methods* (2nd ed.), Thousand Oaks, CA:Sage Publishing.

ANNEX I.

CASE STUDIES: COVERAGE, MAIN FINDINGS AND RESEARCH TEAMS

Automotive industry

Australia

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

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.

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.

Reference: Document CFE/SME(2005)16

Chinese Taipei

Research team: Ministry of Economic Affairs

Coverage: The study covered both SMEs involved in production and in after-sales services shops.

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.

Reference: Room document No 7, 28th WPSMEE Session, 6-7 June 2006, Paris

Japan

Research team: Ministry of Economy, Trade and Industry, Organization for Small and Medium Enterprises and Regional Innovation in Japan

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).

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.

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 centers 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)

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).

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.

Reference: Document CFE/SME(2005)16

Austria

Research team: Austrian Bank for Tourism Development

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

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.

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 Frankfurt am Main, funded by the German Research Council (DFG) and the German Federal Ministry of Co-operation & Development.

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.

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.

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.

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.

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.

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) and the Seville Entrepreneur Association of Travel Agencies (AEVISE), as well as 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 3 suppliers providing a service that complements an existing Microsoft product, thus vertically integrating into Microsoft's value chain, and 3 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

Nu Metro West Africa - Nigeria

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 organizations 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

Caracol and RCN - Colombia

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 interfirm-cooperation. 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 II. ASSESSING THE PRODUCTIVITY OF LARGE, LISTED ENTERPRISES¹⁷

139. This annex addresses one issue related to the respective economic roles of the large, listed, mainly multi-national enterprises (MNEs), on one hand, and, on the other the small and middle-sized enterprises (SMEs). More precisely, it compares the levels of labour productivity achieved in large enterprises with the aggregate macro-economic productivity.

140. 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. Here, we use for this purpose the accounting information for 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, structures, stored and made available by financial databanks, such as Worldscope of Thomson Financial¹⁸.

141. To this purpose, 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 – specially for employment headcount - estimates have been extrapolated from existing information.

142. Once calculated for listed enterprises, labour productivity is then compared to the macro-economic productivity figures (nominal GDP divided by the labour force provided by World Bank). One has to keep in mind that, the aim of this preliminary 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

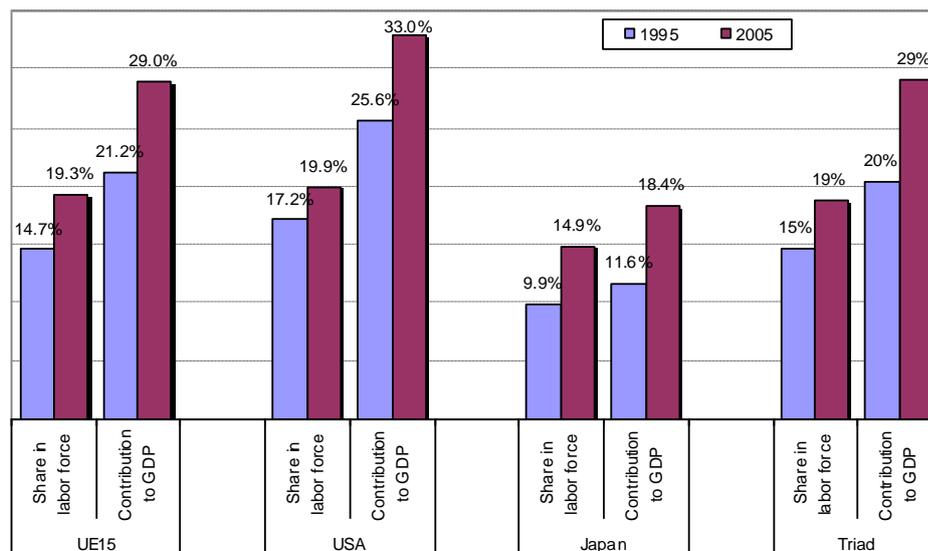
143. From 1995 to 2005, employment in the largest 2'800 enterprises of the Triad - about 1'000 in EU-15; 1'000 in US and 800 in Japan - increased by more than 20 million persons, while their share in total labor force rose by four percentage points, from 15 to 19%. The increase of the employment share 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 US the observed

¹⁷. This Annex was prepared by Prof. Paul H. Dembinski and Claudio Bologna, University of Fribourg and Genève, Switzerland.

¹⁸. The authors express their gratitude to Thomson Financial for giving them access to the data for academic research purposes.

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 US. Looking at the value added figures for the same period, the share of the 2'800 largest enterprises in GDP progressed by almost 10 percentage points, from 20 to roughly 29%. The highest relative contribution of LE is observed in the US (Figure A1).

Figure A1: Share of employment and value added of the LE in labour force and GDP, Triad, 1995 and 2005



Source: Swiss research team Fribourg and Geneva, based on Thomson Financial data

144. 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 dollars terms). For Japan, available data cover only the years 2000 to 2005, but they indicate that the overall decrease (in 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% (US) of the region's average labour productivity.

145. 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 3, 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 analyzed at per employee basis, data show that the share of labour related costs decreased both in the European and US. 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 US. 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 EU (from 11 to 21%), while it remained stable around 17% in the US.

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

146. Since 1990, the role 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 this analysis is limited to five years (2000 to 2005) and covers three large emerging economies Brazil (130 companies), China (with Hong-Kong and Taiwan, 280 companies) and India (240 companies). Despite their limited number, the analyzed companies represent more than 50% of relevant market capitalization.

147. In China and India, the contribution of the observed enterprises to GDP grew much faster than their share in employment. In India, LE the share in labour force increased slightly to 0.5 percentage point during the 5 years, while their contribution to GDP progressed by 3.5 percentage points, from 5.9 to 9.4%. In China, the share of value added in GDP of the 280 large companies increased by 4 percentage points, to 13.4%, with an employment level in 2005 of only 1% of labour force, in progress by 0.4 percentage points 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 percentage point, but is still at from a high level.

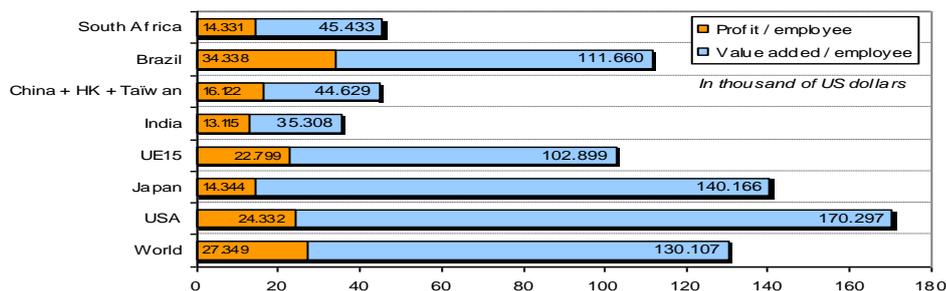
148. In India and China, the level of value added per employee of the large enterprise is 40 and 30 times higher than the country's average labour productivity; in Brazil, the ratio is "only" 10. The dynamics of value added per employee is also staggering, illustrating the driving role of the largest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

Largest listed enterprises as growth enhancers

149. 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 (170'000 USD) 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 an 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 profits levels per employee may be explained to some extent by the growing integration of world financial markets and their global financial requirements¹⁹.

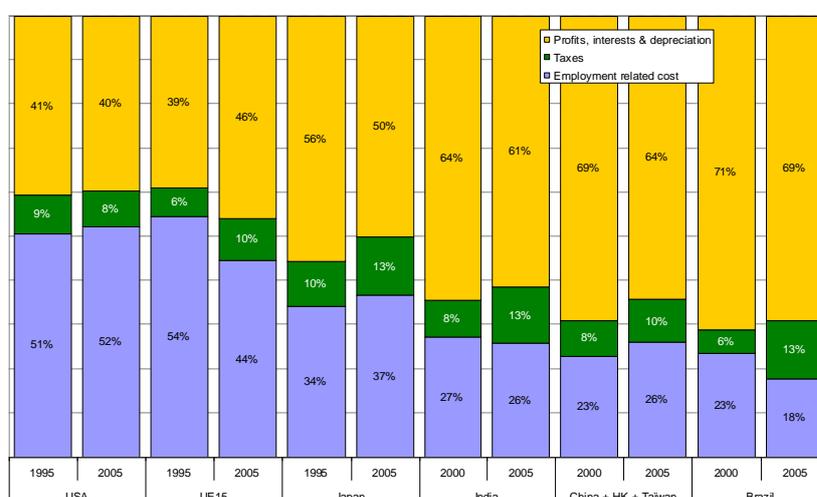
¹⁹ This is fully consistent with the findings of McKinsey, cf. Lowell, L. Bryan "New metrics of corporate performance: profit per employee" in *The McKinsey Quarterly*, 2007 no 1, pp 57-65, and also Lowell, L. Bryan and Zanini, Michele, "Strategy in an era of global giants" in *The McKinsey Quarterly*, 2005 no 4, pp 46-59.

Figure A2: Value added and profits per employee in the Triad and selected emerging economies



Source: Swiss research team Fribourg and Geneva, based on Thomson Financial data.

Figure A3: Components of gross value added



Source: Swiss research team Fribourg and Geneva, based on Thomson Financial data.

Box 16. How are benefits from productivity growth distributed between firms?

How productivity gains are generated and shared among different partner 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. 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, including:

- A 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.

