UNITED NATIONS **TD**

United Nations Conference on Trade and Development

Distr.
GENERAL

TD/B/COM.3/79
20 December 2006

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Commission on Enterprise, Business Facilitation and Development
Eleventh session
Geneva, 19–23 February 2007
Item 3 of the provisional agenda

GLOBAL VALUE CHAINS FOR BUILDING NATIONAL PRODUCTIVE CAPACITIES

Note by the UNCTAD secretariat[1]

EXECUTIVE SUMMARY

Global value chains cover a full range of interrelated productive activities performed by firms in different geographical locations to bring out a product or a service from conception to complete production and delivery to final consumers. The objective of this note is to examine the role of smaller firms and the different forms of upgrading that can be pursued to meet the evolving requirements of lead firms in global value chains. The first part is devoted to illustrating the main features of global value chains, their governance structure, and different forms of value mapping and upgrading offered to suppliers and partners within production networks. The second part is devoted to the policies that facilitate SME integration into global value chains. While policy measures may vary between developing countries, the different experiences, emerging especially from Asia but also from Latin America and Africa, highlight the important role played by an enabling business environment and by proactive measures to improve supply capacity.

[1] This document was submitted on the above-mentioned date as a result of processing delays.

CONTENTS

I. INTRODUCTION

1. On the basis of São Paulo Consensus, the tenth Commission on Enterprise, Business Facilitation and Development recognized the important role of small and medium-size enterprises (SMEs) in employment generation, poverty reduction and sustainable economic growth. It agreed that the internationalization of enterprises, especially SMEs, is an essential way for strengthening the competitiveness of developing-country firms and building their productive capacities. It also requested UNCTAD to continue exploring successful policies to promote enterprise development in developing countries, and in particular to carry out further work on enterprise internationalization, with the aim of identifying replicable best practices for enhancing SME competitiveness, including through business linkages with foreign affiliates and a better integration into global value chains. The Expert Meeting on Best Practices and Policy Options in the Promotion of SME-TNC Business Linkages, held in November 2006, identified the key success factors that can address supply constraints faced by developing countries, particularly the least developed countries, in the implementation of business linkages programmes. The report of the Expert Meeting is contained in document TD/B/COM.3/EM.28/3. At its eleventh session, the Commission agreed to review how developing-country SMEs can better integrate global values chains (GVCs), thus enhancing their national productive capacities

2. Building productive capacities in developing countries has also been identified as an important component of the recent Aid-for-Trade initiative. The recommendations of the WTO task-force report released in November 2006 state that additional, predictable, sustainable and effective financing is fundamental for fulfilling the Aid-for-Trade mandate. The initiative should focus on building supply-side capacity, facilitate trade agreements and assist regional integration. The report of the Expert Meeting on Building Productive Capacities, held in September 2006, stated that UNCTAD should participate actively in the formulation of the Aid-for-Trade initiative. The report of the Expert Meeting is contained in document TD/B/COM.2/EM.19/3.

3. The objective of this note is to explain the role of GVCs in building and enhancing productive capacities of developing countries and economies in transition. By participating in a GVC, developing-country SMEs can access technology, upgrade skills and improve their competitiveness. While policies may vary at the national and industry level, there is a need to develop specific measures to build national productive capacities in order to maximize the benefits derived from integrating SMEs into the international production system.

II. THE ROLE OF GLOBAL VALUE CHAINS IN ENTERPRISE INTERNATIONALIZATION

A. Characteristics of global value chains

4. Global value chains (GVCs) cover a full range of interrelated productive activities performed by firms in different geographical locations to bring out a product or a service from conception to complete production and delivery to final consumers. The activities may involve concept, design, production, marketing, distribution, retailing and R&D functions, and may even include waste management and recycling. Depending on the industry needs, each link of the chain can perform an activity, and different firms add value at each stage of the production or service processes. New transportation, information and communication technologies have driven down the cost of accessing information and trading products and

facilitate the spatial division of value chains. Accordingly, a certain production process can be located in a particular geographical area because of the location's competitive advantages. Among the economic determinants triggering the development of GVCs in developing countries, access to natural resources such as oil, mining and agriculture products is paramount. Additionally, several low-cost locations have integrated GVCs in selected labour-intensive industries. In Asia, because of the possession of certain specialized skills and trained human resources, IT firms in India, and electronics firms in China, Taiwan Province of China, Malaysia and Singapore have successfully integrated into GVCs. Similarly, but to a lesser extent, in Latin America the existence of a cluster of competitive suppliers made it possible for domestic suppliers of automotive parts and components in Argentina and Brazil and electronics components in Mexico to become first-tier suppliers in GVCs.

5. Value chain is an important unit of analysis for understanding enterprise competitiveness. In the past, comparative studies on the competitiveness of a given industry used to focus attention either on individual firms or on clusters, but it is now acknowledged that value chain relationships play a decisive role and that competitiveness does not concern only a single firm's performance but the entire chain. Some firms increasingly lead their business partners upstream and downstream in the value chain. Their dominance arises from specific capabilities, mostly the capabilities to innovate, to create brands, or to coordinate the whole production process. This is evident in technologically rapidly changing industries such as IT and electronics, where there is a constant demand from transnational corporations (TNCs) – typically the lead firms –for SME suppliers to improve quality, delivery and adaptation of production process. On the other hand, there is also a pervasive pressure on TNCs to reduce the number of suppliers in the supply chain in order to increase effectiveness in coordination. Suppliers to GVCs, and particularly SMEs, could risk losing business if they are entirely dependent on one customer in the chain.

6. Global value chains display different forms of coordination (or "governance structures"). The way in which the activities at different points in the chain are coordinated varies considerably, not only between chains but also at different points in the same chain. A GVC can be "buyer driven" or "producer driven" (Gereffi, 1999). Buyers or producers coordinate or control the global value chain process (box 1). Many TNCs have changed their role from being global producers to becoming global buyers and global coordinators, particularly in the buyer-driven chains (UNIDO, 2001).

7. According to Humphrey (2003, p.11), "…large retail and branded companies such as Nike and Gap in clothing and footwear and supermarkets within the food industry can exercise a decisive influence over global value chains without taking direct control of large parts of the production process and its associated logistics". Due to the distribution of functions (R&D, production and marketing) or roles among different tiers of suppliers and distributors, SMEs from selected developing countries have managed to build up competitive advantages, which enable them to compete successfully in global markets. The challenge for SMEs is to determine how and where (in which niche markets) to position themselves so as to best reap the benefits of globalization. What they need in order to create competitive capabilities is the capacity to continuously upgrade their skills so as to increase their returns.

Box 1. Buyer and producer driven value chains

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

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

Source: Gereffi 1999.

B. Value mapping

8. Specialists conduct analysis of value chains by drawing a map which provides an illustration of the flows of goods and services within the chain. Mapping can also illustrate the relationships between different value chains. Depending upon the nature of the analysis the focal point of value mapping may comprise different aspects of the chain such as firm size, value added, or geographical distribution. In addition, mapping is very useful in order to highlight the relevant governance structure for a specific value chain. Mapping a value chain is usually divided into stages. Three examples below provide an illustration of different stages of value chain mapping in selected industries showing their diversity and complexity.

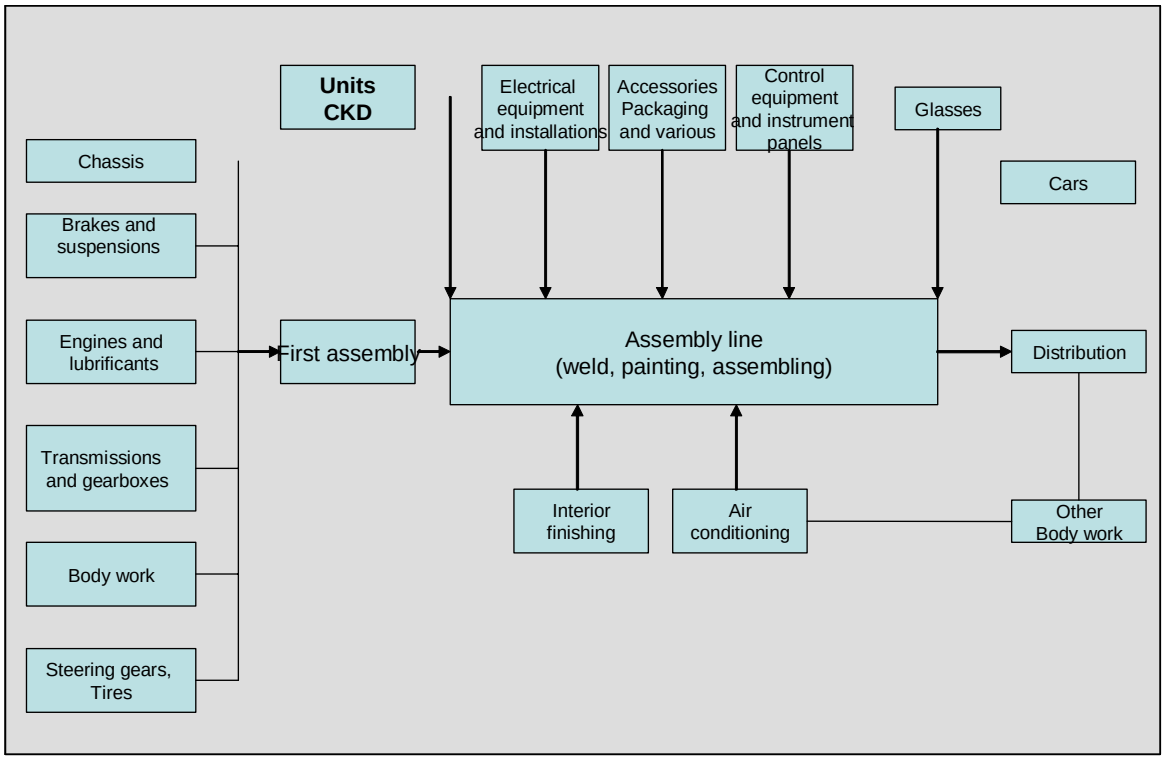
9. First, it is necessary to draw an initial map of the supply chain including all activities and production processes carried out locally. Figure 1 shows the value chain of the Colombian automobile industry and gives some initial indication of the local suppliers' size and importance. The map groups activities into different chain links, consisting of relatively homogenous products in terms of their technical characteristics of production such as common raw materials, intermediate products or products sharing similar production technologies. The map and related tables based on a detailed survey provide information on each segment's contribution to value added, employment and exports.

10. According to the survey, in Colombia the most important chain elements of the automotive industry with respect to job creation are breaks and engines and electrical equipment. The largest value-added contribution to the chain stems from car assembly, which generates about 61 per cent of the total output value. The largest contributor to exports comes from tires and transmissions (Departamento Nacional de Planeación, Colombia, 2005). The supply chain map, however, does not provide information on the connection of local suppliers to global producers. According to a recent analysis of the global automotive industry, there is a targeted restructuring aimed at a consolidation of critical technology expertise, production capabilities and capital access provided by global suppliers.[2] A small

[2] Center for Automotive Research, Altarum, 2006.

number of global suppliers develop local networks of second- and third-tier subcontractors, leading to supply chain improvements and upgrading. They act as anchor companies and systems integrators, playing an important role between individual vehicle manufacturers and whole network suppliers. For example, there may be anchor companies that pull together transmission and drivetrains and others that pull together engine components, fuel delivery, engine electricals, and exhaust and emission control. It is therefore important to complete the information gathered locally, mapping the connections between local Colombian subcontractors and global suppliers.

Figure 1. Colombia – supply chain for the automotive industry



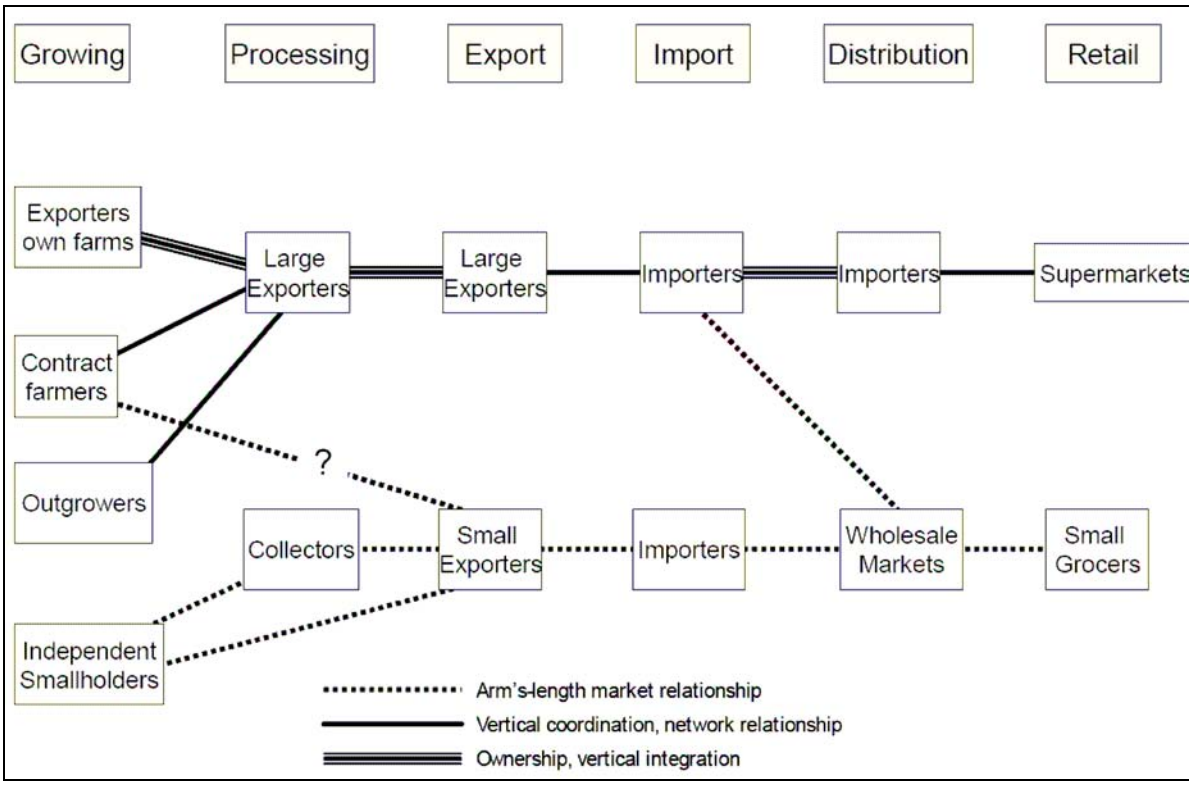
Source: Departamento Nacional de Planeación 2005.

11. The second stage of value mapping draws the local supply chain connections to activities elsewhere, and their connection to final markets. Figure 2 shows, for example, the structure of the fresh vegetable trade between Kenya and the United Kingdom. Until the mid-1980s, trade in this sector was handled through a series of arm's-length market relationships, and there was little vertical integration. However, the shift in the business strategies of supermarkets based in the United Kingdom (UK) transformed the supply chain into a vertically integrated structure. The changes were driven by market demand for fresh vegetables, quality standards (including also safety, environmental and labour standards) and the provision of a year-round supply. All these developments required tight coordination and control of the value chain. (Gereffi et al. 2003).

12. UK supermarkets developed closer relationships with UK importers and African exporters and strengthened their overall control over the value chain by regular monitoring (figure 2). More rigorous incorporation requirements and standards for suppliers in the product chain led to a reduction of the number of suppliers and upgrading of the selected

partners. As a direct result, the stake of smallholders that traditionally represented the backbone of the Kenya export horticulture trade had decreased significantly by the late 1990s.

Figure 2. Kenya-UK fresh vegetable value chain



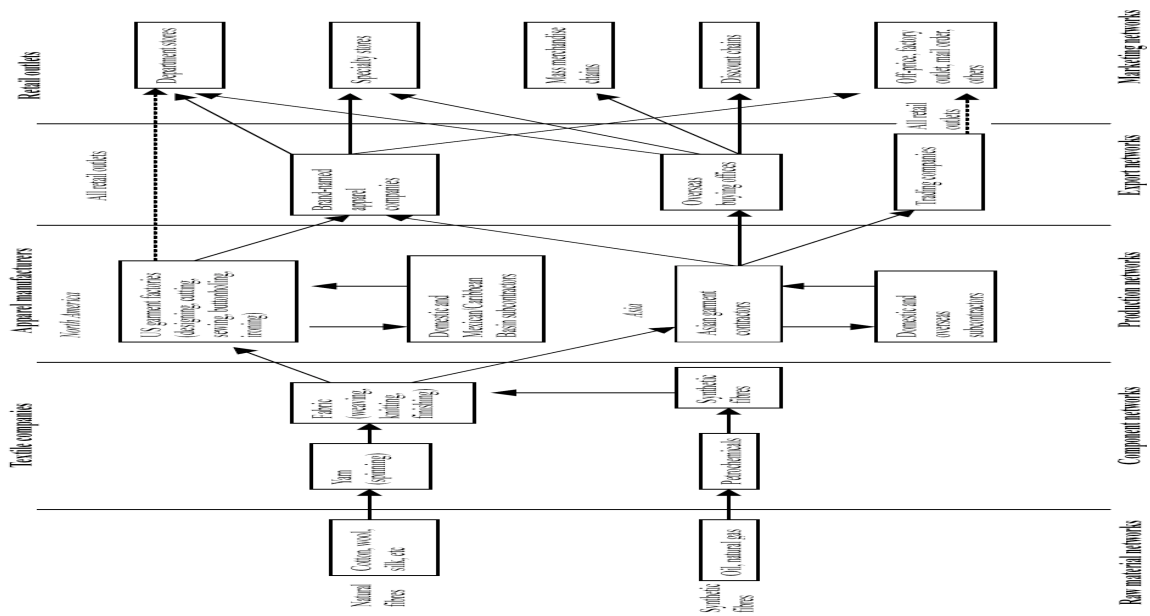
Source: Humphrey 2003.

13. The third stage typically includes the mapping of a GVC including the location, type of activities, and buyers' and producers' relationships. Apparel is a good example to illustrate the dynamics of a buyer-driven value chain (figure 3). Large companies like Nike, Gap or Limited Inc. coordinate and may control a decentralized production network, typically located in developing countries. In the apparel industry, the physical production of goods is usually separated from the design and marketing, and distribution.

14. The apparel value chain can be divided into five main parts: raw material supply, including natural and synthetic fibres; provision of components, such as the yarns and fabrics manufactured by textile companies; production networks made up of garment factories, including their domestic and overseas subcontractors; export channels established by trade intermediaries; and marketing networks at the retail level. Some chains in the textile and garments sector are truly global, with activities taking place in many countries in different locations. In the case of garments, this may mean that design takes place in Milan, London, Paris, Tokyo or New York, fabric is sourced from China, trim and other inputs may be made in India, and assembly may take place in Mauritius or other low-cost locations. Globally dispersed production requires very careful planning and management. Some chains can be vertically integrated. For instance, a study of the silk sub-sector in Thailand revealed that the

modern Thai silk chain consisted of a single vertically integrated firm that was involved in all activities from silk worm research to retailing the final product.

Figure 3. Global value chain for textile and apparel



Source: Gereffi and Mamedovic, 2003.

C. Types of upgrading in value chains

15. The performance improvement of all the firms participating in a GVC requires changes in the nature and mix of activities carried out in each link in the chain and the relationships among firms. These changes cover process, product, functions and chain upgrading.

16. **Process upgrading** aims at increasing the efficiency of internal processes. It includes both processes within individual links in the chain (e.g. increased inventory turns, lower scrap) and between the links in the chain (e.g. more frequent, smaller and on-time deliveries). Empirical evidence shows a variety of relevant learning processes among suppliers in GVCs.3 For example, the dissemination of business concepts and standards such as ISO 9000, ISO 14000, "good manufacturing practice" (GMP) and "good agricultural practice" (GAP) among firms serving GVCs has largely been triggered by a combination of pressure and support from the lead firms. Successful adoption of such standards is an important means of industrial upgrading, one that in part protects firms from lower-cost competitors who are not able to comply with these standards. For example, Nestlé has helped local suppliers in developing countries to meet better standards in agricultural produce, offering training and technical assistance in field care, post-harvest practices, storage and transportation.

17. **Product upgrading** includes the ability to produce components or retail new or more competitive products developed by lead firms. Distributional and after-sales services are among the activities most frequently transferred within GVCs, e.g. automobile dealers, gas

[3] For example, UNCTAD (2001).

stations, restaurant chains, travel agencies, drug stores, and courier services. Outsourcing these activities implies considerable advantages for downstream partners, mainly because they can rapidly cover extensive markets while minimizing risks and investment in distribution channels. The local distributor thus benefits from the use of an established brand name, a proven business concept and the transfer of knowledge from the brand owner. This greatly reduces the risk of failure for the local firms, particularly SMEs. However, the local partners remain highly dependent on the brand owners. In some cases, the local SME is forced to pay substantial fees and royalties for using the partner's brand name and business concept. Product standards are also more and more often enforced through value chain relations, given that the final producer or distributor of the product is held accountable for compliance and thus takes a strong interest in assuring compliance at previous stages of the value-adding process.

18. **Functional upgrading** seeks to increase the value added by changing the mix of activities conducted within the firm (e.g. taking responsibility for, or outsourcing, accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (e.g. from manufacturing to design). Original brand manufacturers in the area of IT and electronics in a number of developing countries have been able to perform complex functions in GVCs because of the critical mass of skilled enterprises and human resources these countries had developed. For instance, HP-Compaq, Nortel, General Motors and Sony have outsourced IT services to Wipro in India; Eli Lily and GSK Pharma outsourced pharmaceutical functions to Shashun Chemicals (India); and Bharat Forge (India) has been performing engineering for Meritor, Caterpillar, Toyota, Ford and FAW (China).4 Some SMEs became global suppliers or even TNCs in their own right through functional upgrading in a GVC (box 2).

19. **Chain upgrading** creates opportunities for suppliers that have developed competences and skills to move to a new value chain. For example, firms in Taiwan Province of China gradually moved from the manufacture of transistor radios to calculators, to TVs, to computer monitors, to laptops and now to WAP phones.

Box 2. ENGTEK Malaysia: From a backyard business to a global supplier

Eng Technology Holdings Bhd. (ENGTEK), which started as a Malaysian SME in 1974, is today a global supplier for the computer hard disk drive and the semiconductor industries. The firm has grown from a no-name SME to a high-precision manufacturer that supplies competitive, quality value-added products and services to several large TNCs in the electronics industry. The company grew up in a policy environment conducive to enterprise development. Under Malaysia's Vendor Development Programme, TNCs have been encouraged to assist local suppliers to become competitive at the global level. Thanks to this programme, ENGTEK has engaged in closely knit partnerships with TNCs. For example, Intel provided financial as well as technical assistance needed for the company to produce semi-automated wire bonders in 1981. With partners such as Advanced Micro Devices, Bosch, Fujitsu, Hewlett Packard, Maxtor, Readrite and Seagate, ENGTEK has been involved in designing products, bringing in its specific experience in product development and gaining a competitive edge vis-à-vis potential competitors. As a first-tier supplier, ENGTEK has been able to link up to the global production systems of its TNC clients, moving up the value

[4] IBEF, "India: Fastest Growing Free Market Democracy" (http://ibef.org/brandindia/).

chain over time. The company later diversified its portfolio of partners and products to reduce risks. It widened its range of products, for example from precision tools to manufacturing of disk-drive components. It developed its own technology for original equipment manufacturing and achieved original design manufacturing capabilities, which further reduced its dependency on any particular foreign affiliate. It has also invested abroad to improve its competitiveness.

Source: *World Investment Report 2001*, pp. 129-130, and www.engtek.com.

III. POLICIES THAT FACILITATE SMES' INTEGRATION INTO GLOBAL VALUE CHAINS

20. Almost any private sector development policy somehow impacts on value chains and their competitiveness, and it may have a direct or indirect influence on the ability of SMEs to integrate into GVCs. The competitiveness of local SMEs depends in large part on the "competitiveness" of the local business climate as a location for productive investment. Lack of required hard and soft infrastructure at national and territorial level can sometimes pose severe obstacles to GVC operations. SMEs also need assistance to improve their supply capacity and overcome the high costs associated with exporting, for example in connection with quality requirements, environmental and labour standards, and the high cost of transport, especially for remote and landlocked countries in Africa and elsewhere. Integrating into GVCs also presents SMEs with challenges of innovation and continuous labour productivity improvement.

A. Enabling business environment

21. Creating a conducive environment for local firms to become suppliers and partners in GVCs requires the development of competitiveness policies. National competitiveness includes all production factors: physical infrastructure, economic and technological infrastructure, education and training, entrepreneurship and innovation, the regulatory frameworks, firms' quality standards and logistics networks between territories. Competitiveness has become part of the explicit agenda for policy makers, in many cases through a national coordination body or territorial "competitiveness councils".

22. Many countries in Latin America have competitiveness councils that have introduced a range of policy measures aimed at improving the general business environment or supporting specific sectors. In Colombia, for example, the Government has designed an Internal Agenda to promote productivity and competitiveness and build consensus among national and local institutions, the private sector and civil society on strategic directions and actions in the short, medium and long term to improve the productivity and competitiveness of the production system (Departamento Nacional de Planeación, 2006).

23. However, the capacity at the national and subnational levels to deliver effective administration and planning and to design policies for specific sectors and territories is often lacking.

24. The poor quality of government administration of business regulations is a common feature of the local business climate in several developing countries. Shortcomings are often

present in areas of fiscal administration and other regulations, including in respect of customs, land, labour and business licensing. Poor administration of fiscal and other business regulation remains a key weakness in national competitiveness, hampering the ability of local firms to integrate into GVCs. Experience varies widely, but the issue is a more pressing problem in the least developed countries that have governance issues.

25. Key dimensions of governance include: a state of law; separation of government and private affairs; a judicial system with competent and independent judges who apply and enforce the law; and transparent administrative rules. Strengthening efforts to consolidate the rule of law and good governance should include enhancing policy and regulatory frameworks (e.g. as regards investment, competition, financial reporting and intellectual property protection) that foster a dynamic and well functioning business sector. Disfunctioning of the business environment in developing countries typically includes:

- Inefficient customs administration;
- Slow customs and immigration clearances at the borders of landlocked countries;
- Intrusive corporate tax compliance measures and arbitrary assessments;
- Delayed and unpredictable issuance of business licenses;
- Delays in land title transfers;
- Rigid labour laws and difficulties in enforcing changes.

26. Reducing transaction costs and working toward increased openness to foreign trade is also necessary to allow the domestic enterprise sector to participate fully in GVCs. The principal internal constraints on developing competitive exports in developing countries include inadequate infrastructure and logistical support, high concentration on a few export commodities, and lack of information on export markets; while the external constraints include tariff and non-tariff barriers, weak demand in international markets for commodity-based exports, and environmental and labour regulations applied to products from developing countries.

27. Taxation is another key general regulatory measure affecting the business climate, particularly in export-oriented activities where products must be globally competitive. Many countries maintain high general taxes coupled with specific fiscal incentives for priority areas. Some incentives seem excessively generous, unclear or prone to change, and this casts doubt on their sustainability and efficiency. Many incentive policies focus only on headline rates of corporate tax and neglect other important business costs such as import duties. Typical problems in tax policy design include incentive regimes that discriminate between similar businesses or offer incentives only to larger investors; frequently such incentives must be applied for, and the process of granting and monitoring them becomes bureaucratic. Investment Policy Reviews carried out by UNCTAD have emphasized that countries should design a general fiscal regime that covers target activities and is consistent with the national investment promotion strategy. Special incentives may be required in certain sectors and activities in order for them to be competitive in attracting foreign direct investment (FDI). These incentives should be offered on a non-discriminatory and automatic basis. A well designed incentive scheme can be critical to the success of investor targeting to attract a global value chain leader.

28. Government policies should also take account of the potential of liberalization and deregulation in the services sector for the development of infrastructure and the required

improvement in the overall business environment. This approach can be undertaken jointly with efforts to increase business sector competition. A combined approach allows greater domestic and international openness to business to go hand-in-hand with safeguards against negative effects from a rise in concentration.

29. SMEs are hit hardest by a weak business environment. Recognizing these constraints, a recent initiative involving a private/public sector fund – the Investment Climate Facility (ICF) – supported by NEPAD and endorsed by African Heads of State focuses on improving the continent's investment climate and business regulations. The ICF aims to facilitate the removal of real and perceived obstacles to doing business in Africa. This will involve encouraging support for change, working with Governments to formulate business-friendly policies and regulations, working with the institutions responsible for administering regulation to improve their capacity and capability, improving platforms for dialogue between government and business, and improving the information and services available to Governments and investors.

30. The ICF covers eight priority areas: property rights and contract enforcement, business registration and licensing, taxation and customs, financial markets, infrastructure facilitation, labour markets, competition, corruption and crime. It also supports recommendations from the Africa Peer Review Mechanism process in relation to the investment climate. In this context, the NEPAD's African Peer Review Mechanism is proving helpful in assessing and fostering progress on investment climate improvements and enterprise development. Other initiatives at regional level are reviewed below.

B. Improving supply capacity

31. As a result of greater TNC activities and industrial policies aimed at maximizing the benefits from FDI, some SMEs from Asian countries have successfully integrated into GVCs. In this regard, many countries in Asia have introduced specific policies to attract FDI and supportive measures improving their enterprise capacities and promoting public/private partnership. These partnerships have favoured SMEs' integration into GVCs, including the development of upstream and downstream business linkages with TNCs.

32. Host country measures to improve supply capacity include a range of general policies and specific programmes contributing towards the integration of SMEs into GVCs. These actions address three main obstacles:

- Gaps in the information on available capabilities;
- Firm-related product and processes shortcomings; and
- Barriers at the meso level resulting from lack of partnership between public and private-sector institutions.

33. Many national Governments have taken initiatives to improve the supply capacity of local firms by increasing their opportunities to integrate into GVCs through selective measures, including provision of information, training facilities and skills upgrading activities. Box 3 illustrates the case of Thailand. Similarly, in 1994 the new government of South Africa switched from demand-side to supply-side policies in order to foster firm-level upgrading and greater productive efficiency. Among these policies, three were directly targeted at upgrading manufacturing organization:

- The Workplace Challenge provided subsidies for consultancy services for changes in workplace organization.
- The Competitiveness Fund provided subsidies for firms restructuring their business strategy and internal organization.
- The Sector Partnership Fund provided subsidies to groups of firms joining together to achieve collective efficiency.[5]

34. Developing a new generation of entrepreneurs able to connect into supply chains also requires access to start-up capital, technology upgrading and mentoring, as well as relevant information. In Costa Rica, the Programme for Development of Suppliers for Multinational High Technology Enterprises involves provision of information on local suppliers through information in a database.[6] The programme also provides for technical assistance, including access to finance, project development and training to suppliers selected by foreign affiliates. In the case of Malaysia, the Industrial Linkage Programme develops Malaysian SMEs into competitive manufacturers and suppliers of parts and components and related services to large companies, including foreign affiliates. The programme is supported by provision of information, establishment of a database, seminars and provision of financial incentives. The Global Supplier Programme (GSP), launched in 2000, involves training of SMEs in critical skills and linkages with foreign affiliates and large companies in Malaysia.

35. The Government of Singapore has addressed the issue of product and process upgrading for SMEs. It has formed a Franchise Development Centre and established a Franchise Development Assistance Scheme. Similarly, Malaysia's Ministry of Entrepreneur Development has created a Franchise/Vendor Division. In other countries, multilateral (e.g. the ILO in Indonesia) and bilateral (e.g. USAID in South Africa and Russia) donors support the development of indigenous franchise systems. The Malaysian programme is aimed at building awareness of the potential benefits of franchising; reviewing the existing legal requirements; regulating the franchising business; facilitating contacts between international franchisers and potential local franchisees; encouraging and supporting the establishment of national franchising associations; providing consultancy and training for potential franchisees during the initial phases of establishment of contacts, negotiation of contracts and set-up of the new enterprise; helping to develop indigenous "SME-to-SME" franchises; and providing finance. The training initiative is implemented in collaboration with local Skills Development Centres such as the Penang Skills Development Centre. The Government of Malaysia has also provided an on-line business matching service (Enterprise Connect) for joint-venture partners and technology to connect with international business partners.

Box 3. Thailand: building productive capacities through upstream and downstream linkages

The Board of Investment of Thailand (BOI) plays an important role in supporting the development of competitive local suppliers and facilitates linkages between Thai firms and TNCs. Two specific programmes under the BOI have been instrumental in forging linkages between Thai suppliers and foreign affiliates and in upgrading Thai parts and components

[5] UNCTAD(2005), p. 74.
[6] See Inter-American Development Bank, "Project TC 9901043: National Suppliers Development for High Technology Enterprises" (http://www.iadb.org/projects/Project.cfm?project=TC9901043&Language=English) and WIR 2001.

manufacturers. They are the Skills, Technology and Innovation (STI) programme, and the BOI Unit for Industrial Linkage Development (BUILD). The STI programme provides incentives to foreign companies that invest in Thailand in activities that enhance human resources capacity or facilitate specific technology transfer to local firms. BUILD is an integrated capacity building programme established in 1992. Its goal is to identify the needs of manufacturing assemblers and match them with local suppliers of parts and services. It includes:

- **Vendors meet customers programme.** This programme helps develop domestic parts and components, provide opportunities for parts manufacturers to enter new assembly value chains, and encourage investment in local parts and components manufacturing. It helps assemblers reduce importation and logistics costs in the supply chain, and speeds up the production delivery process. It first identifies the parts and components needs of manufacturing clients, particularly in automotive or electronics industries, along with the quality standard production specifications. Local companies that produce the parts and components that have been requested will then be contacted by a BUILD representative, who will accompany the supplier to the assembly plant to see the assembly operation and to understand the quality requirements. The buyer and seller are then able to speak directly, with each side communicating exactly what is needed and what can be supplied. These on-site visits occur approximately twelve times in a given year and are driven by the needs of the assembler. If the vendor is unable to produce the requested part in the volume required or to international standards, the BUILD unit will work with that company to overcome the problem and enhance its technology, skills and management. Thai suppliers connected with TNC affiliates include Hitachi Global Storage Technology, Hino Motors Manufacturing, Bangkok Komatsu, Fujitsu, Matsushita Electronic Components, and Seagate Technology.

- **BUILD Marketplace.** This is a one-stop shop for parts and components, it provides another facility for assemblers to source local parts and components, and it connects Thai manufacturers to assemblers. Under this programme, assemblers and suppliers meet together with BUILD once a month to discuss the details of parts specifications, volume, quality standards, and production and delivery issues. As with the vendors meets customers programme, Marketplace is driven by the supply chain needs of the assembler.

- **BUILD Sourcing Programme.** This programme arranges subcontracting seminars that bring together companies looking to source parts and components in Thailand, providing an overview of their specifications, volume requirements and types of local suppliers. A presentation will be offered to 40 suppliers, followed up with one-on-one meetings that allow each supplier to gain additional information about the market and the technology and enable the buyer to get a better sense of the supplier's potential.

Source: Board of Investment, Thailand.

36. The cluster development approach, which is based on enhancing specialized skills and networking dynamics of firm agglomerations operating in a specific geographical area, can help local firms integrate into GVCs. Hence, national government policies targeted at developing clusters will increase the competitiveness of the local investment environment for

FDI through the provision of efficient local firms and stronger supporting industries. Much synergy can be generated by TNCs operating in a competitive cluster environment, as the examples of electronics in Malaysia and Mexico and the automotive industry in Thailand show.

37. Market-driven initiatives have played a key role in increasing the opportunities for business linkages integrating local firms into GVCs. The experience of the most successful host economies in terms of promoting linkages demonstrates that TNCs can play a major role in capacity building. A number of innovative approaches to creating linkages have been undertaken by TNCs themselves, for example Hitachi, Intel, Motorola, Philips, Toyota and Unilever.

38. Other innovative initiatives have been undertaken within the framework of public/private partnerships that did not spring up spontaneously (UNCTAD, 2005). For instance, under the Programa de Mobilização da Indústria Nacional do Petróleo e Gás Natural **(**National Mobilization Programme for the Oil and Natural Gas Industry) in Brazil, Sebrae and Petrobas initiated a linkages partnership to help SMEs integrate into the supply chain of large companies in the industry. The partnership helps SMEs meet the requirements of the industry by strengthening their capabilities as suppliers through management training and achieving a higher technical level (i.e. in respect of quality standards, health and safety, and corporate social responsibility management systems). In order to increase the opportunities for linkages, business networks and matchmaking events such as the Rio Oil and Gas International Fair held in September 2006 have been organized. Since 2005, more than 1,400 SMEs have been supported by this partnership. Sebrae is also involved with a "Large Buyers, Small Suppliers" initiative, which mobilizes large private and public companies to increase the participation of SMEs in their supply chains.

39. Another good example of public/private sector cooperation is the business linkage programme in Uganda that UNCTAD supports though its local EMPRETEC centre.7 Besides the programme in Uganda, UNCTAD has also built linkages programmes based on public/private sector partnership in Brazil, and preliminary work has been carried out in Argentina, Ethiopia, Ghana, Kenya and Viet Nam. In the development of programmes, EMPRETEC centres and programmes have proved very useful, acting as focal points in promoting the business linkage concept and in its implementation. In other countries, multilateral (e.g. the ILO in Indonesia) and bilateral (e.g. USAID in South Africa and the Russia Federation) donors support the development of indigenous franchise systems.

40. Private sector initiatives play an important role in establishing a business environment conducive to the establishment of value chain links. For example, the Singapore Business Federation launched a Global Sourcing Hub to help Singapore enterprises gain access to global business opportunities. This portal facility serves as an e-market place to supply information on business opportunities to interested suppliers, help firms access supplier and buyer communities, and provide online directory listings of suppliers and buyers. The facility

[7] EMPRETEC is an integrated capacity-building programme run by UNCTAD since 1988 that helps to foster entrepreneurship capabilities and the growth of internationally competitive SMEs in developing countries and countries with economies in transition. EMPRETEC is present in 26 countries and is coordinated by UNCTAD headquarters in Geneva. The programme is based on public/private partnership and it aims at developing sustainable mechanisms to unleash entrepreneurial potential and provide business development services (BDS) for local SMEs.

also aims to help Singapore SMEs showcase their products and services, and it provides a platform to raise the visibility of the SMEs vis-à-vis TNC affiliates and other large enterprises. The Supplier Development Programme of the Czech Republic involves the participation of the Czech Ministry of Industry and Trade, in cooperation with the Chamber of Commerce and various business associations, to strengthen the capabilities of domestic suppliers. Seminars, fairs and matchmaking activities such as "Meet the buyer" events have been organized. Technical assistance is provided to help upgrade local firms in high technology industries (WIR 2001 and www.czechtradeoffices.com).

41. The Federation of Malaysian Manufacturers (FMM) and the Malaysian South-South Corporation (MASSCORP) have played a role in improving the opportunities for Malaysian enterprises to be integrated in GVCs. For instance, a Malaysian Business Centre was established in Kampala, Uganda, by MASSCORP to promote Malaysian products and business linkages in East Africa. The FMM provides information to foreign investors on Malaysian products and manufacturing services. Among other things, it provides information on business opportunities to Malaysian firms, organizes trade and investment missions, publishes directories of manufacturing industries, represents a platform for business networking, disseminates such information as enquiries from overseas buyers and sellers, and offers an SME Resource Centre.

42. Within the framework of private sector initiatives, institutions based in investors' home countries or TNCs can help prospective suppliers or host country SMEs integrate into GVCs. Efforts can include extension of technical cooperation and capacity-building programmes to improve the capability of developing country SMEs in product and production processes. For instance, in facilitating business linkages and SMEs' integration into global value chains, the Japan External Trade Organization (JETRO) has introduced an on-line Trade-Tie-up Promotion Programme Special Corner that showcases Malaysian SME products and services on its website. The programme includes a business-matching database that supports searches for international business partners. JETRO had also undertaken a number of initiatives to help ASEAN auto parts suppliers integrate into the GVCs or production networks of Japanese automakers.

43. JETRO Bangkok introduced an automotive industry training programme in which a "roving" Japanese auto industry expert teaches Thai auto parts suppliers about new technologies and advises on factory upgrades.8 JETRO has also organised a series of annual conferences on ASEAN Auto Supporting Industries, which aimed to forge closer links between ASEAN suppliers and Japanese auto manufacturers. Aside from providing information and network opportunities, these events encouraged ASEAN auto parts manufacturers to explore business and investment opportunities and technology tie-ups with Japanese counterparts. The events helped Japanese automobile-related manufacturers and their affiliates in ASEAN expand their local procurement.

44. Many embassies abroad provide information and support match-making programmes. For example, the Danish Embassy in Viet Nam provides information on investment opportunities in selected industries (e.g. the timber and wood processing industry, and the plastics industry) in the host country to prospective Danish investors. The Business Linkage Programme facilitates and provides financial support to prospective Danish investors in

[8] Investment Review, BOI, October 2005.

matchmaking, study visits to Viet Nam, and elaboration of business plans (Embassy of Denmark, 2005). Under its Business-to-Business Programme, the Embassy supports the establishment of long-term and mutually partnership between Danish and Vietnamese enterprises (Embassy of Denmark 2006). The Danish Embassy in Uganda is also providing similar assistance to Danish investors.

45. At the regional level, different schemes have been introduced to facilitate more cost-effective sourcing of parts and components, providing opportunities for economies of scale and cost reduction, as well as for increasing the overall efficiency of operations. Policies in support of regional integration in different parts of the world have encouraged TNCs to adopt regional production networks whereby affiliates of TNCs located in different parts of the region perform specific functions within an interrelated production process or value chain (Wee and Mirza 2004, Ernst 2004). For instance, Toyota has a network of operations linking different components such as regional headquarters, assembly facilities, financing and training centres and parts suppliers in different ASEAN countries. Nestlé's affiliates in Indonesia, Malaysia, the Philippines and Thailand are part of a regional production network involving intra-firm trade in food processing. Similarly, Matsushita affiliates in Indonesia, Malaysia, Philippines and Thailand are part of a production network for the exchange of electronics parts and components (WIR 2003, p. 51).

46. Regional integration in ASEAN, for instance through the ASEAN Free Trade Area (AFTA), the ASEAN Industrial Cooperation (AICO) scheme and ASEAN Investment Area (AIA) arrangements, has contributed to the development of regional production networks by TNCs (ASEAN Secretariat 2001; JETRO 2003; JBIC 2003) in which enterprises in ASEAN countries are involved in providing inputs and services to other entities in the networks (automotive, electronics sector). AFTA has a programme that reduces tariffs to 0-5 per cent in a regional market of 10 countries that currently has a combined GDP of more than $800 billion. AICO immediately advances the 0-5 per cent tariff benefits accorded under AFTA to approved AICO projects, and AIA promotes ASEAN as a competitive investment region through three main programme areas (liberalization, facilitation and promotion). In promoting business linkages, ASEAN has also taken steps to provide information on suppliers, for example the publication of a Directory of Associations of Service Suppliers[9] and the establishment of the ASEAN Supporting Industry Database (ASID) to connect buyers of parts and components to local suppliers in the region.

47. In the Americas, economic integration and trade accords, including Mercosur, the Andean Pact and the North American Free Trade Agreement (NAFTA), have created regional markets that stimulate intraregional trade and investment flows encompassing these regions. The regional trade pacts made it feasible for companies in Latin America to coordinate operations in adjacent countries in order to achieve economies of scale and scope and expand their subregional and panregional operations. TNCs have developed networks within subregional clusters (e.g. the Andean region, Mercosur or Central America). Some regional production networks benefit from existing free trade areas, as defined by the Mercosur Pact (Brazil, Argentina, Uruguay, Venezuela and Paraguay) or the Andean Pact (Colombia, Ecuador, Peru and Bolivia); others are growing panregionally throughout Latin America.

[9] See ASEAN Secretariat (http://www.aseansec.org/6654.htm).

48. Enterprises in Africa can also benefit from regional integration. Many initiatives at the pan-African or regional level look at improving supply capacities. For example, the Organization for the Harmonization of African Business Law (OHADA) is seeking to develop a harmonized system of commercial law in francophone West Africa, including the development of rules governing securities, establishment of commercial companies, general commercial law, recovery procedures, transport of goods, arbitration procedures and bankruptcy procedures. The COMESA Common Investment Area and the establishment of a regional investment promotion agency will promote FDI on a regional basis. While this regional effort is still at an early stage of development, experiences in other regions suggest that such efforts can encourage foreign affiliates to adopt a regional operational strategy or production network. For example, the policy of the South African Government in favour of strengthening regional cooperation has led South African firms to invest in Africa. South African investment in the SADC region has been influenced by the selective relaxation of exchange controls and investment incentives. State-owned enterprises and SMEs such as Metorex and DPI plastics have joint-venture investments in SADC countries (UNCTAD, forthcoming).

49. In the area of entrepreneurship development, African EMPRETEC representatives have recently launched a regional networking initiative, the EMPRETEC Africa Forum, to reinvigorate the EMPRETEC programme in Africa. In particular, Zimbabwe, Ethiopia and Uganda will lead and strategize with other EMPRETEC Centres in the continent on the best ways to mobilize resources, establish an effective communication and marketing strategy, and ensure the consolidation of existing programmes and the creation of new country programmes in Africa with the support of UNCTAD. The network will involve all relevant stakeholders, including the private sector, and will facilitate South-South cooperation.

IV. CONCLUSION

50. Overall, developing countries need to place the development of productive capacities at the heart of national policies. The development of domestic industry or service networks, which would be able to link effectively with international production networks, also requires the promotion of entrepreneurship and enhancing competitiveness at firm level through technology and business linkages. This calls for official development assistance (ODA) to be used 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 building appropriate support for trade policy formulation for WTO accession and negotiating bilateral and regional agreements, there is need to enlarge the scope of the Aid for Trade initiative to include support for productive capacity development.

51. Understanding GVCs is important to facilitate developing-country firms' participation in the international production system. Policymakers need to gain comprehensive knowledge about value chain processes in order to design adequate policies and translate them into practical policy interventions. A recent review of the literature on different types of initiatives undertaken by Governments to analyse and develop value chains distinguishes three main approaches, although often Governments apply hybrid models:

(a) A "comprehensive planning approach" based on detailed analytical value chain mapping and market analysis preceding interventions;

(b) The organization of participatory workshops for value chain analysis with less academic rigour but with stakeholder workshops as a key element; [10]

(c) The design of incentives for private-sector-driven projects whereby corporate value chain leaders or business associations take the lead in the conception and implementation of initiatives, often within a territorial cluster.

52. Developing-country firms continue to face a number of obstacles that inhibit growth and reduce their ability to establish trade and investment relationships within GVCs. Some of these obstacles relate to hard infrastructure; others are more general (or horizontal) and relate to the level of development of firms in such areas as skills and educational attainment; still others are more industry-related (vertical) or specific to local contexts. To address these constraints, there is further need to build up reliable power supplies and the communication and transport network, namely roads, railways, air, sea and inland ports, and pipelines, to ensure that local firms can connect. There is also a need to build the soft infrastructure (policies, procedures and institutions) and appropriate horizontal coordination mechanisms at local, national and regional levels. The range of policies to build productive capacities and upgrade the competitiveness of local firms is wide and should cover the general business environment, industrial, trade and investment policies, and other complementary policies in such areas as technology, R&D and SME development.

53. International organizations such as OECD, ITC, UNCTAD and UNIDO have proven to be useful in helping developing country SMEs integrate into GVCs through policy advocacy and technical assistance. The contributions of donor agencies and the initiatives of home Governments of TNCs are also valuable. Taking into account the ongoing debates in the field of GVCs and also specific policy objectives, OECD and UNCTAD have launched a common research project aimed at enhancing the role of SMEs and indirectly the role of SME clusters in GVCs. The project focuses on the relationship between SMEs and large enterprises in five selected industries (automotive, scientific and precision instruments, software, tourism and creative (cinema)) and on the factors that influence them. The final report of the project will present an overall analysis of the project findings, as well as their policy implications, and will propose policy recommendations. These joint efforts will help developing country SMEs to be an effective partner in GVCs and help their countries to benefit from globalization.

[10] The International Trade Centre has developed SHAPE, a series of workshops that combine practical planning techniques with market information and sectoral diagnosis. The international consulting firm Mesopartner has developed the PACA system that starts with a kick-off workshop involving local stakeholders, which is followed by a series of interviews with local players (firms, business associations, supporting institutions, local government, and others), and mini-workshops with groups of local actors. The diagnosis and proposals are elaborated and presented immediately thereafter.

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